No. 17

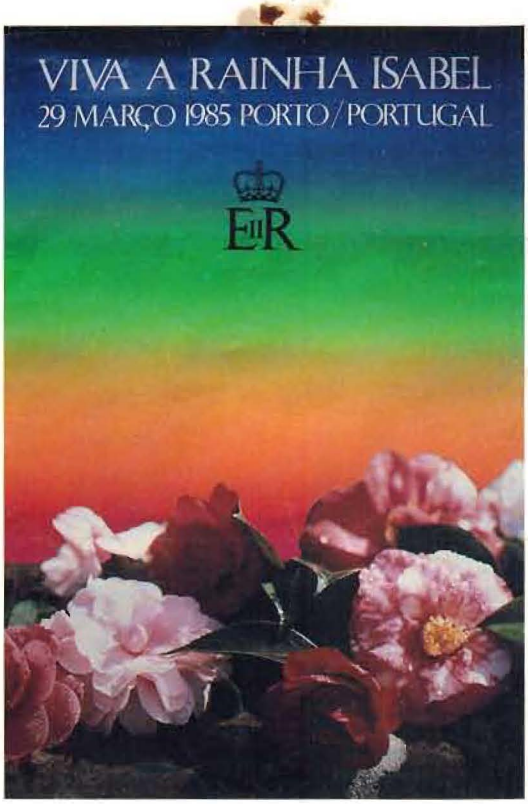
OCTOBER 1985
INTERNATIONAL NUMBER
ISSN 0159-656X

INTERNATIONAL CAMELLIA JOURNAL

国際ツバキ会誌

KOKUSAI TSUBAKI KAISHI
LE JOURNAL INTERNATIONAL DU CAMELLIA
RIVISTA INTERNAZIONALE DELLA CAMELIA
INTERNATIONALE ZEITSCHRIFT FUR KAMELIEN
REVISTA INTERNACIONAL DA CAMELIA
INTERNATIONAL CAMELLIA TIJDSCHRIFT

AN OFFICIAL PUBLICATION OF THE INTERNATIONAL CAMELLIA SOCIETY



The Oporto Flower Show Poster

The International Camellia Society
was inaugurated in 1962 with the following motives:

1. To foster the love of Camellias throughout the world, and to maintain and increase their popularity.
2. To undertake historical, scientific and horticultural research in connection with Camellias.
3. To co-operate with all national regional Camellia Societies and with other Horticultural Societies.
4. To disseminate information concerning Camellias by means of bulletins and other publications.
5. To encourage a friendly exchange between Camellia enthusiasts of all nationalities.

International Camellia Journal

No. 17 OCTOBER 1985

An Official Publication of The International Camellia Society

Contents *Contenu Contenuto Contenido* October 1985

Cover: The President, Mrs Violet Lort-Phillips, at the I.C.S. stand at the Chelsea Flower Show 1985.
(Photo: Mrs Y. J. Cave)

President's farewell

Les adieux du Président

Despedida del Presidente

Il commiato del Presidente

By the time you read this, you will have chosen your new President. Welcome to my successor — she or he will, I am sure, receive the loyal support of everyone. It has been an honour to serve you; I have enjoyed my three years enormously. Thanks to the help and hard work of my officers, colleagues and friends, it has been a golden time for me.

Our membership is increasing. We welcome the new region of Austria and Germany. Work progresses on Nomenclature, trials for cold-hardiness and lengthening the flowering period of Camellias, with the delicious added dimension of scented flowers. Many of us will meet at the Australian Congress in September1986, and we look forward to a visit to Italy in the Spring of 1988. What exciting projects are in store for the years to come! For example, could we explore the many other uses of the Camellia by persuading people about its homeopathic properties? I believe the roots are used in China, and what would we do without the many delicious cups of tea brewed from the leaves of *Camellia sinensis*?

Reverting to the problems of cold-hardiness, the news from China is that they have suffered many losses of Camellias that the Society took to Kunming. Dr. Zhang Alau wrote that the shrubs had suffered from the cold Winter and 'other reasons'. The American collection with larger plants was the one that survived best; the Australian, New Zealand and U.K. plants were almost all decimated. Perhaps the quarantine precautions, spraying, etc. may have contributed to their demise.

Whilst in China, I saw several fine trees of *Camellia reticulata* in Kunming, one was reputed to be 600 years old; also sturdy young trees. As one of our members, Stephen Haw, the photographer and writer, wrote in a letter to me on the subject:

"This is yet another illustration of the complexities of the hardiness problem. It is undoubtedly not just a question of Winter temperatures (there have been many cold, if not colder Winters in Kunming with sudden drops of temperature) but involves many other less easily recognised factors."

We hope to be able to send more plants or scions to China, to fill the European leaf of the 4-leafed clover bed prepared to receive them. The Japanese already have a well-established group. It might be wiser to despatch plants for Spring planting, which time is also the beginning of their rains. We have written to the Kunming Institute and await their advice.

Reviewing the years: there are many 'giants' in our Society. I think back to the early days; of the inspiration and help of Professor Waterhouse; of the late Sir Harold Hillier, a fount of knowledge given freely; of the late Frank Knight, one of our first Directors, who died recently. The list is long and would not be complete without the inclusion of Mr. Satomi, gentle and erudite, who — with Mr. Ishikawa — entertained me in Japan in 1962. They opened my eyes to seeing the many lovely gardens, my mind to accepting new ideas, and my spirit was refreshed by beauty. Splendid men, who cared passionately about plants and their well-being and who grew them to perfection. I make no apology for quoting again the poet, Coleridge, who said: "Flowers are lovely, love is a flower like Friendship is a sheltering Tree".

In the violent world in which we live, the I.C.S. and kindred Societies have an important role to play, linking the past and the future, growing not destroying, communicating our vision of a world that has time for, and a place for groves and trees, playing a part in conserving and building the earth.

Au revoir,
Violet Lort-Phillips
30.7.85

Le Président fait ses Adieux

Lorsque vous lisiez cette note vous aurez déjà nommé votre nouveau président. Je lui souhaite la bienvenue avec toute confiance qu'il — ou elle — recevra l'appui sympatique de tous les membres. Pour moi les trois ans de la présidence m'ont donné grand plaisir et j'ai beaucoup apprécié l'honneur de rendre ce service à notre société.

Le nombre de nos sociétaires augmente toujours et nous accueillons l'accession des deux régions Autriche et Allemagne. Les études sur la nomenclature avancent ainsi que les essais quant à la hardiesse contre le froid et pour le prolongement de la période de fleuraison tout en y anjoutant la délicieuse conception de fleurs parfumées. J'espère que plusieurs de nous se rencontreront de nouveau à l'occasion du congrès en Australie en août 1986 et, également, nous attendrons avec plaisir notre visite en Italie au printemps de 1988. On peut envisager des projets passionants à l'avenir. Par exemple, ne pourrions nous pas étudier la possibilité d'élargir l'utilité du Camellia en faisant connaître ses possibilités pour le traitement homéopathique? Je crois qu'en Chine on se sert des racines dans ce but. Et comment pourrait-on se priver des délicieuses tasses de thé provenant des feuilles de *Camellia sinensis*?

Revenant au sujet de la hardiesse contre le froid nous avons appris qu'en Chine on vient de perdre un grand nombre des Camellias que nous avions présenté à nos amis à Kunming. Le Docteur Zhang Alau nous a informé que ces arbustes ont souffert de la froid et "pour d'autres raisons". La collection provenant de l'Amerique comprenant de plus grands arbustes est celle qui a mieux survécu; celles d'Australie, de Nouvelle Zélande et de Grande Bretagne ont été pratiquement decimées. C'est possible que les règlements de quarantaine et le passage au vaporisateur etc. ont contribué aux pertes encourrues.

Pendant que j'étais en Chine je vis plusieurs beaux *Camellia reticulata* à Kunming notamment un qui, soi-disant, avait 600 ans; et je vis aussi des beaux jeunes arbustes vigoureux. À ce sujet, un de nos membres, Monsieur Stephen Haw, photographe et auteur, m'écrivit:

... ceci démontre encore une fois la complexité du problème de la froideur. Évidement ce n'est pas seulement une question des températures d'hiver (il y a eu plusieurs hivers très froids en Kunming avec des baisses de températures soudaines); plusieurs d'autres éléments pas facilement identiables sont impliqués.

Nous espérons envoyer en Chine de nouveau des arbustes et scions afin de compléter la section 'Europe' comprise dans le parterre 'trèfle à quatre feuilles'; les préparatifs ont déjà été faits pour leur réception. Une collection offerte par le Japon est bien établie. Peut-être ce serai mieux si nous faisions notre expédition pour le plantage au printemps, moment du commencement de la saison des pluies. Nous avons communiqué avec l'Institut de Kunming dans ce sens et nous attendons leur réponse.

Passant en revue ces dernières années de la vie de la Société, il est évident qu'elle comprend toujours beaucoup de grandes personalités. Quant au passé je me rappelle du feu Sir Harold Hillier, grande source d'informations et de conseils qu'il donna librement. La liste est longue et ne serait pas complète sans M. Satomi,érudit et de caractère doux, qui comme l'a fait M. Ishikawa, me receva chaleureusement au Japon en 1962. Toutes ces personnes m'ont fait reconnaître plus profondément la beauté offerte par les jardins et la valeur d'idées nouvelles, tout conduisant à un renouvellement d'esprit par le moyen de la beauté. De grands hommes très sensibles quant au bien-être de la vie végétale et cherchant à cultiver les plantes jusqu'à la perfection. Sans excuses je cite de nouveau le poète anglais Coleridge: "Flowers are lovely, love is a flower like Friendship in a sheltering Tree."

Dans le climat de violence que nous éprouvons en ce moment la ICS et telles sociétés jouent un rôle important en liant le passé et l'avenir, faire croitre et ne pas détruire et transmettant l'idée générale d'un monde qui peut apprécier et s'occuper des beautés de la nature prenant part dans la conservation et le renouvellement de notre planète.

Au revoir
Violet Lort-Phillips
30-7-85

There is continuing and increasing interest in the horticultural treasures of China. The planting of the "Garden of Friendship" last year by representatives of the I.C.S. forged another link between China and the horticulturalists of the rest of the world. It is encouraging to note, in Mr. Harold Fraser's article in this Journal, that the Chinese Secretary General applauds the idea of the Garden of Friendship and has given instructions for it to be expanded. The extension of this Horticultural connection with China is to be commended and fostered.

One of the Society's leading members has said that the Journal is the 'main spring' of the Society. It is true that it provides a valuable thread linking all Society members. Nevertheless, the printed word, however welcome, is no substitute for the personal contact, and it is the Congress and the Regional Conferences which create the personal contacts and warm friendships which are the life blood of any society. This was amply demonstrated by the recent Brighton Congress and the subsequent tours, both of which are reported in this Journal.

Once again contributions to the Journal range over a wide area of the world. We include a note from India on the subject of tea and, by coincidence, a number of other articles make a passing reference to *Camellia sinensis*. After all, we are a Camellia Society and should not entirely neglect commercial species in our love for the decorative. We also have a first in a short article from Russia and the substantially increased interest in Germany in Camellias and in the I.C.S. will also be noted.

This is the last of the four Journals which your present Editor undertook to edit, and he would like to take this opportunity to thank all those who, by the supplying of articles, photographs and general advice have helped to maintain (it is hoped) the standard of the Journal. In particular he would wish to thank Major Walter Magor of Lamellen, Cornwall for his considerable assistance over the past 3 years, not only in proof reading but also in making available to the Editor his substantial horticultural knowledge. At the time of writing it is not known who the new Editor will be but, whoever it is, we wish them every success and express the hope and belief that they will receive the same support as has been accorded to the present Editor over the past four years.

Amazing success at Chelsea

Un remarquable succès à Chelsea

Éxito clamoroso en Chelsea

Sorprendente successo a Chelsea

See picture on front cover

JOYCE WYNDHAM

It was the idea of our President, Mrs. Lort-Phillips, that the members of the I.C.S. in the Channel Islands, put on a "Welcome" display at the Chelsea Flower Show, for the delegates visiting Chelsea, following the Conference at Brighton.

With the assistance of enthusiastic helpers, and the co-operation of the Royal Horticultural Society, in finding us a stand, late flowering camellias were delivered at Chelsea.. They came from Stonehurst, Trehane Camellias, the Savill Gardens, and the Channel Islands.

The theme of the set piece was a Dutch still life of camellias in a grecian vase on a marble table, set in a picture frame of swags of assorted camellia leaves. A background of cream material formed an alcove, and drapery. The many camellias received were greatly reduced by dropping their blooms at the last moment, and it was decided to use solely Camellia japonica 'Alexander Hunter' in the vase. Each bloom was carefully wired through the calyx to the stem, and the whole arrangement set in oasis, with the hope that it would stay fresh for

the further four days of the show. How successful this proved to be, was shown by the fact that the blooms were still intact on the last day.

Amazement was shown by the public that camellias were at Chelsea, and photographers were in abundance all the time to record the stand. Such interest was shown that at times it was not possible to get near, and all literature and the R.H.S. handbook on Camellias were sold out on the Private viewing day.

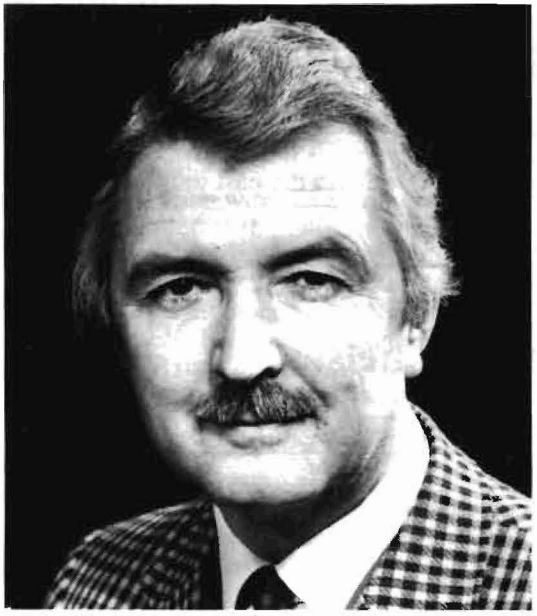
My thanks are due to the following for their help with this display:
Mrs. V. Lort-Phillips
Trehane Camellias
Stonehurst Nurseries
Beryl, Countess of Rothes
Campbell-Preston International Garden Design
The Savill Gardens
Helpers from the Channel Islands
and all the members who helped to 'man' the stand for the length of the show.

New Society Officers

Nouveaux membres du bureau de la société

Nuevos funcionarios de la Sociedad

Nuovi dirigenti dell'Asspociazione



Ralph Budge

Ralph Budge retired in February, 1985, after 32 years as group Secretary with the National Farmers' Union in his native Devon. He served the 7 years of World War II in the Royal Artillery and Indian Artillery. Such service took him to France, Norway, Ceylon, India and Burma. He holds the rank of Major (which he does not now use) and was awarded the Territorial Decoration. His qualification of Chartered Secretary has been of particular value to the Society.

He and his wife, Ruth, (who was born in Shanghai) have travelled extensively as have their 3 children — two daughters and a son. All 3 are honours graduates and he is very proud of them. He says, with the usual twinkle in his eye, that the secret of producing bright children is to marry brains!

Both Ralph and Ruth have "camellia-itis" although, according to Ralph, it is Ruth who is the knowledgeable one of the two.

Ralph took over the Secretaryship at short notice when the previous Secretary, David Davies, felt unable to continue and the Society is grateful to him for the efficient and pleasant way in which he has carried out the duties during the past year. Pending the result of the presidential election, it is not known who will be the Society's Secretary in 1986 but if his services are required he will be happy to serve.

DAVID DAVIES who resigned as Secretary of the Society about the time that last year's Journal was coming off the press, had acted in that capacity for nearly two years. He will chiefly be remembered for the detailed work he undertook in collating the views of Directors in the production of the form for Registration of New Camellias which went through no less than 3 drafts. We are all indebted to him for this conscientious work.

Dr. Klaus Hackländer

Dr. Klaus Hackländer has consented to become the Membership Representative for the German/Austrian region. Since his teens he has been a garden lover for 30 years and has had a special interest in Camellias for the last 8 years. As will be seen from an article in this Journal, he is particularly concerned with cold hardiness in Camellias and in growing them in tubs and greenhouses. He is enthusiastic about the "Camellia Renaissance" in Germany and it is believed that it is largely due to his enthusiasm that the number of Society members in the region has recently increased considerably.

Apart from Camellias his interest is in the history of Europe and in co-operation with the city of Trier. His wide horticultural interest has resulted in his becoming a member of the American Camellia Society; The Royal Horticultural Society; The National Trust and Deutsche Rhododendron and Gesellschaft.

Frank Knight, V.M.H. 1902-1985

Frank Knight — une évaluation

Frank Knight — una reseña

Frank Knight — un apprezzamento

An Appreciation by MRS. V. LORT-PHILLIPS

Frank Knight began his distinguished career in Horticulture as an apprentice to the well known Williams family in Cornwall, when he was thirteen. At seventeen he started a three year course at the Royal Botanic Gardens in Edinburgh and in 1923 he went to Kew. He had the pleasure of planting the Rhododendron seeds sent back by George Forrest and seeing them flower and win awards. He moved on to Bakers' Nurseries at Cogshall. My sister and I first met him when he was running the Knaphill Nurseries at Woking in 1932. During the Second World War Frank was Horticultural Officer in Home Security and in charge of camouflage. After the war he was Managing Director of Notcutt Nurseries in Suffolk and the "guru" to many young gardeners. He became the Director of the Royal Horticultural Society Gardens at Wisley in 1955. He retired in 1969 but continued as a member of the R.H.S. Committees. He received the Victorian Medal of Honour in 1958.

This list of appointments does not convey the charm, enthusiasm and quiet wit of the man. Those of us who watched the television series "Gardeners World" will remember him showing his "new" garden in Suffolk — and more recently his brief appearance in a programme on Cornish gardens. He was a discerning judge and generous to his friends. I have living momentoes of this each Spring when his gift of two lovely yellow roses, named after his wife Helen Knight, are covered with flowers. One is planted next to the grotto of St. Fiacre, patron Saint of Gardeners, and the other catches the eye as one enters the corner of the garden called the Golden Way, which commemorated our Golden Wedding.

Frank and his charming wife Helen were supporters and members from the beginning of the I.C.S. of which he was one of our first Directors. Helen introduced me to the delight of Nerine Lilies, which he grew so well. He will be remembered with much affection by many gardeners and friends.

Sir Harold Hillier, V.M.H.

Sir Harold Hillier — une évaluation

Sir Harold Hillier — une reseña

Sir Harold Hillier — un apprezzamento

An Appreciation by LADY ANNE COWDRAY

The death of Harold Hillier has left a great gap in the horticultural world, not only on the professional side but also to so many amateurs like myself. To be taken by Harold round his Arboretum was a great treat and horticultural lesson.

His knowledge of plants was so vast and his memory awe inspiring but he was always ready to impart that knowledge and I certainly appreciated his friendship and the advice he gave me on many occasions.

The ICS tours in which he took part were always the more interesting for that reason as there would be few plants which he could not name, whether deciduous or evergreen, in flower or leafless, from tropical or temperate climes, as his knowledge seemed to cover every type and species from all corners of the earth; but I always felt that conifers were his special love.

Having friends and acquaintances in all parts of the world he travelled widely searching for new plants, always accompanied by his wife Barbara, who looked after him with loving care.

He will be sadly missed by many people but remembered with great affection by his many friends.

ICS CONGRESS AUSTRALIA : The International Camellia Society — 1986 Sunday 14 Sept. to Friday 19 Sept.

Camellias of the South Pacific, and Australian Wildflowers, are just two of many reasons why you should plan to be in Sydney by September 14, in the southern springtime of 1986.

Here are the tentative arrangements. Talk to your friends about forming a group, and send your reservations EARLY.

The Congress Hotel: The Sydney Menzies, opposite Wynyard Park, was totally refurbished this year. It is adjacent to all forms of city transport, close to the magnificent Sydney Opera House, Sydney Harbour and Harbour Bridge, Botanic Gardens, and the city shopping district.

Alternative Hotel for "young family" members: In response to the recommendation of M Jean Laborey at the Brighton Meeting of Directors, we have reserved accommodation for *40 couples* at OLIMS HOTEL, Wylde Street, Potts Point, on the bus route 3km from Menzies. Olims is currently being refurbished, and we have secured a guaranteed 1986 rate somewhat lower than Menzies. The Olims accommodation must necessarily be limited, so that we can assure the congress hotel (Menzies) of a high percentage of occupancy.

Deposits for Olims must be received by Nance Swanson by MARCH 30, and payment in full by April 30. Overseas members will have priority; then interstate members, if rooms available.

CONGRESS PROGRAM:

Sunday 14 September All congressionists are to register at the ICS Congress Suite in Menzies, irrespective of where they are accommodated.

6.00-7.00 pm: Get together Welcome Party. Dinner follows; own arrangements.

Monday 15 September Breakfast; own arrangements (in hotel room, dining room, or nearby coffee shop).

9.00 am: Official Opening of Congress.

9.15-12.30pm: Congress Addresses, including coffee break.

12.45 pm: Lunch provided, at Menzies.

2.00-5.15pm: After Coach Tour, visiting *Koala Park*, Pennant Hills — unique Australian animals and birds; the cuddly Koala, wombat, kangaroo, emu, galah, and dingo. *Eryldene*, Gordon — superbly-restored garden and home of the late Professor and Mrs E. G. Waterhouse, which won the 1984 Award of Australian Architects for the finest restoration project of that year.

Evening: Own arrangements. Home hospitality offered by Sydney members for visiting con-

gressionists. See reservation form.

6.30pm: ICS Directors Meeting (dinner included) Menzies Hotel.

Tuesday 16 September Breakfast; own arrangements.

9.00-12.30pm: Congress Addresses, including coffee break.

12.40pm: Coaches leave Menzies to board m.v. "City of Sydney", for two-hour *Luncheon Cruise* around the world's most beautiful harbour. Lunch supplied; liquor own expense.

3.00: Coaches leave Man 'O War Steps for alternating guided tours of *Sydney Opera House *Sydney Botanic Gardens. Return to hotels by 5.30 p.m.

Evening: Own arrangements. Home hospitality available; see reservation form.

Wednesday 17 September Breakfast; own arrangements.

9.00am: Coaches leave Menzies for full-day tour, with boxed lunch provided, and visiting * Private gardens at Pymble. *Camellia Grove, St. Ives; one of the world's great camellia nurseries. *Australian Wildflower Garden, St. Ives. *West Head: enjoy lunch in a wildflower reserve offering breathtaking views of Broken Bay, Lion Island, Barrenjey Lighthouse, Palm Beach, and picturesque Pittwater. *Tour continues via Church Point, Bayswater, Mona Vale, Palm Beach. *Return to Sydney via Wakehurst Parkway, French's Forest, The Spit, Sydney Harbour Bridge, reaching hotels by 5.30pm.

Evening: Own arrangements. Home hospitality available; see reservation form.

NOTE: Sydney Opera House programs will be notified in next bulletin. Advance reservations may be made.

Thursday 18 September Breakfast; own arrangements.

9.00am: Choose from *alternative* half-day coach tours: 1) Via Rose Bay to Vaucluse House, beautiful home and old camellia gardens of a distinguished early Australian statesman, William Charles Wentworth. Then South Head, glorious views Sydney Heads, Bondi Beach, Centennial Park (Sydney's "Central Park") returning to city by 1.00pm. 2) Via centennial Park to the E. G. Waterhouse National Camellia Garden at Miranda. Return to city by 1.00pm. Lunch and afternoon own arrangements for city shopping, hairddressing, etc.

7.00pm: Farewell Banquet, Menzies Hotel. Formal conclusion of Congress program.

Friday 19 September Breakfast; own arrangements. Post-Congress Tours depart.

(See separate sheets for Congress booking and Tour booking forms)

Concession Airfares to Australia: The accredited Travel Agent for our congress hopes to organise for a co-operating agent in most countries to shortly contact Regional Membership Representatives with information concerning the possibility of group airfares. Meantime, inquire from your regular travel agent. Members travelling separately, in any case, should ask their local agent for the best possible basis, as reduced fares are often available.

Pre-Congress or Post-Congress Tours Apart from information given on following pages, all within-Australia air travel for overseas visitors is now subject to a special "See Australia" *30% discount*. If not known to your travel agent, have them telex Traveland South Pacific.

Pre-Congress Events you may be able to consider in 1986: Sept 6 and 7: Adelaide Hills (South Australia) camellia exhibition at Stangate House. Enquiries — Elsie Bridgland, 47 Milton Terracem Stirling, S.A.5152.

Sept 13 and 14: Canberra camellia and spring bulbs Show at Albert Hall, Australian Capital Territory, in conjunction with Australian daffodil championships.

Congress Venue The Menzies Hotel, 14 Carrington Stret, Sydney.

Official Congress Travel Agent Traveland South Pacific, GPO Box 3489, Sydney NSW 2001 : Telephone (02) 29-2143 : Telex 22260.

ICS Congress Liaison Officer : **Jennifer Yates** also Post-Congress Tours enquiries : **Jennifer Yates.**

CONGRESS SECRETARY: Please direct all enquiries and all CONGRESS RESERVATIONS to: Nance Swanson, 43 Wellington Road, East Lindfield, NSW 2070, Australia. Phone — (02) 46-1287.

Congress Co-ordinator: Eric Craig, 4 Lowther Park Ave, Warrawee, NSW 2074. Phone — (02) 449-8906.

International Camellia Congress

Brighton, England. May, 1985

Le Congrès de Brighton

El Congreso de Brighton

Il congresso di Brighton

MAYDA REYNOLDS and LOUISE HARMON

Jersey, C.I.

(see colour section)

Our party of four from Jersey, Channel Islands, arrived at the Old Ship Hotel a day early amd we are delighted to find several delegates already installed, including Mr. & Mrs. Milton Brown (U.S.A.) Dr. & Mrs. John Pedler, (Australia) and Mr. & Mrs. Richard Clere with a large group from New Zealand.

The Old Ship Hotel is Brighton's only large privately owned hotel and prides itself on its service and excellent food. The Hotel is full of character and it was felt our overseas visitors would appreciate its "olde worlde" charm!

Brighton is a good centre for that area known as "The Garden of England", beautiful countryside and many gardens of botanical interest. The Congress organiser, Miss Cicely Perring, promised us a full and varied programme and this was certainly fulfilled.

The gardens we visited all showed some evidence of a severe winter, but not as much as expected, considering the low temperatures we had experienced. Fortunately, the Camellia season was late this year and we saw more in bloom than is usual in May.

Thursday, 9th May

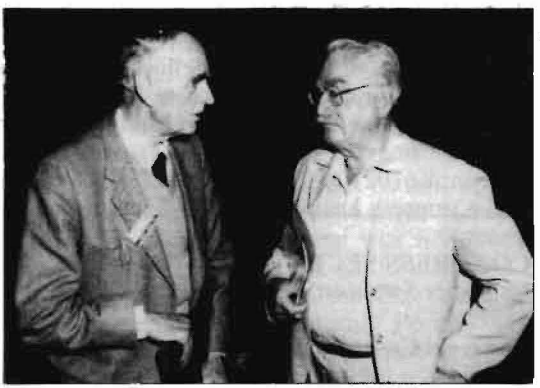
There was a fever of excitement in the morning as final touches were put to the I.C.S. Reception Lounge and to the "Shop". John Meade was in charge of the Shop which was well stocked with items of interest including Camellia notelets, Camellia silk scarves, Camellia brooches and back copies of Camellia Journals; paintings of Camellias by Mrs Joyce Wyndham who was also responsible for the beautiful floral arrangements in the reception rooms.

The official registration commenced at 2.30 p.m. 170 delegates from America, Australia, France, Italy, Japan, New Zealand, South Africa, Spain and the United Kingdom; all were warmly welcomed and given Congress Bags containing a map, pamphlets and brochures of the gardens to be visited and details of lectures — plenty to read!

As always on these occasions, there was a marvellous atmosphere as old friends met and new friendships started.

In the evening, we attended a Civic Recep-

John Roberts and Kenwyn & Betty Clapp



John Tooby and Jean Laborey

Greg Davis

tion in the Banqueting Room of the Royal Pavilion and much enjoyed the splendid decor of the room — walls painted with Chinese figures, a marvellous domed ceiling, large chandeliers in tulip design and an enormous table set for a formal dinner. The Deputy Mayor, Mr. Charles Jermy, welcomed the delegates, commenting that the Pavilion, which is being beautifully restored will take another two years to be finished. Our President, Mrs. Vi Lort-Phillips replied on behalf of the I.C.S. and we returned to the Hotel for an excellent dinner.

Friday, 10th May

Our first garden visit was to Leonardslee, a spectacular woodland garden created by Sir Edmund Loder in 1889. He was an athlete, big game hunter, traveller and artist and became a keen botanist when he purchased Leonardslee from his father-in-law. The natural streams of the forest were dammed to create a series of Hammer ponds. The soil is a deep loam over sandstone, free from lime and well sheltered from the North. Ideal for the growing of Rhododendrons, Azaleas and Camellias.

Rhododendrons and Conifers were Sir Edmund's main interest; after his death, his son Sir Giles Loder continued to improve the garden and planted many Camellias — he has won numerous prizes at the Royal Horticultural Society's shows. Sir Giles, a well-known I.C.S. member and former Vice-President, retired in 1981 and his son Robin is now in charge.

Robin's wife met us as the coaches arrived — it was a fine sunny day and the first thing we noticed was the marvellous perfume from the Rhododendron Loderi. We walked through the Loderi area down to the Dell where we found many fine Camellias including 'Alba Casoretti', 'Donation', 'Contessa Lavinia Maggi', 'Elegans' and 'E. G. Waterhouse'. We wandered down to the Lakes and saw a nesting swan. We admired the banks of Azaleas and the interesting variety of Conifers and walked through the Camellia Grove and Rock Garden to the Coaches. It had been quite a long walk and we were ready for Lunch, this was a packed lunch supplied by the Hotel. Some enjoyed Lunch in the Coaches but many opted for a picnic and sat on the grass or on wooden logs.

After lunch we went to Heaselands. Unfortunately it became overcast and a little cold but this did not affect our enjoyment of this beautiful garden which is open to the Public only on certain days and on this occasion was open just for the I.C.S.

Mrs Ernest Kleinwort and her late husband came to live at Heaselands (part of his family's estate) in 1932 and they created this garden from what was originally a meadow and oak-pine woodland. It is a series of small gardens each distinctive: the formal area near the house has a two acre lawn and beds of heathers, roses and azaleas. A well planted Rock Garden is opposite the front door and against the house is a large *Hydrangea petiolaris* and several Camellias, 'Adolphe Audusson', 'Donckelarii' and 'St. Ewe'.

The walled garden at the side of the house has many shrubs including Rhododendrons, Azaleas, Eucryphia 'Nymansay' and *Magnolia stellata*. There is a Rose Garden, Paved Garden, Warm Garden, in which we found a lovely C. 'Lady Clare' and, after strolling through these, we came to the water garden — four ponds formed by damming a stream, a wild garden and beyond this, the woodland with many Rhododendrons and Camellias.

Craig Davis

Lady Anne Cowdray and Violet Lort-Phillips

Craig Davis

Mrs Jack Pedler, John Tooby and Vi Stone

The stream flows from the ponds through a valley banked by azaleas and bluebells, a lovely picture.

The whole garden is so neat and well maintained, but near the ponds, it was good to see areas of grass left uncut because cowslips and primroses were growing. It was interesting to see a Japanese delegate photographing the cowslips. This native plant has become so rare.

We came back to the house through the South Garden with its fine Golden Scots Pine and Blue Atlas Cedar and enjoyed a most welcome tea and delicious cakes.

This garden seems labour intensive and the Head Gardener, Mr. Staples, has a good team of five undergardeners, but even so it would be impossible to maintain a garden to this high standard without the right machinery. But it is the finishing touches, the hand edging which gives this garden that "well cared for" look, plus the interest of Mrs. Kleinwort and her son.

We returned to the Hotel and after Dinner there was an excellent talk and well-presented slide show by Mr. A. V. Skinner, the Head Gardener of Sheffield Park, the National Trust Garden we were to visit the following day. Meanwhile, the Society's Directors were "enjoying" a lengthy meeting!

Saturday, 11th May

We had three interesting and informative lectures in the morning. The first two were Japanese papers with slides.

1) The distribution of wild Camellia Japonica in Japan and South Korea.
2) The effects of temperature changes.

The third lecture was given by Margaret Scott, of the Efford Experimental Horticultural Station. Her illustrated and interesting talk included advice on the use of pine bark and peat as a medium for rooting cuttings.

After lunch at the Hotel we sallied forth in our four coaches to Sheffield Park Gardens. We were met by Mr. Skinner who conducted us round the gardens pointing out special vistas and plantings. The Garden has one of the finest collections of autumn colouring, flowering and coniferous trees and shrubs in the British Isles. Even in Spring the diversity in form and colour, and the glorious reflections in the Lakes are a delight to behold.

There are five Lakes — Fish Pond; 10ft. Pond; Middle Lake; Upper Woman's Way Pond and Lower Woman's Way Pond. These last two intriguing titles refer to the legend of a headless woman who sometimes appears and then vanishes into thin air!

Much of the spring colouring came from the large areas of Rhododendrons and Azaleas and some Camellias. We saw several Camellias which were planted in the early 1900s including 'Donckelarii' and a fine 'Lady Clare'. Camellias planted in the new "Queens Walk" area which has been developed since 1977, include 'Tomorrow', 'Konron-Kuro', 'Guilio Nuccio', 'Debutante' and 'Magnoliaeflora'.

There are so many paths to follow, so many different scenes to enjoy, the afternoon passed all too quickly. I liked Mr. Skinner's quotation from Alexander Pope's epistle to Lord Burlington, 1731; it rings true for this truly beautiful garden:

Let not each beauty everywhere be spied
When half the skill is decently to hide,
He gains all points who pleasingly confounds
Surprises, varies and conceals the bounds.

Greg Davis

Tom Perkins and Edith Mazzei

Greg Davis

Dr. & Mrs Carroll, Frank & Jean Pursel and Greg Davis

We enjoyed a quick tea at the Cafe and then returned to the Hotel. In the evening, a Baron of Beef Dinner was served in the Ballroom Suite, the Baron was piped in with great ceremony and deftly served.

After dinner we had a most interesting slide show by Mrs. Yvonne Cave, FPSNZ (ARPS) entitled "Camellias in New Zealand". There were over 300 slides of excellent quality which confirmed what we already knew — they do grow beautiful Camellias in New Zealand. It was a long show but many people felt they would like to see all the slides again — so much to absorb at one sitting.

Sunday, 12th May

Our first lecturer was Mr. John Brooks, well-known English Landscape Designer. He gave an interesting talk on the development of Gardens through the ages with particular accent on the 20th century garden. He presented garden design as an art form using plants, styles and fashions as garden furnishings. He referred to the work of Lutyens and Gertrude Jekyll and although he admitted he was not a great Camellia fan, we all enjoyed his well illustrated talk.

Our next lecturer was Dr. J. Crézé who gave an interesting and informative talk on his work in grafting 'in vitro'. He followed up his talks given in Kyoto and Sacramento, giving the results of his experiments in this field.

Mr. Milton Brown gave the next lecture entitled "The Yellow Camellia". This was a fascinating account of the search for and development of the *Camellia chrysantha*. "Brownie" painted a glowing picture of more colourful Camellias in the future, through hybridization with *C. chrysantha*.

After lunch at the Hotel we split into groups and visited one of four gardens according to choice. We had been looked after so well, guided and organised, it was difficult for some of us to decide!

Wakehurst, High Beeches and Borde Hill were three of the gardens of which more anon.

Nymans was the garden we selected. Another National Trust property, it retains the charm of a family home. Nymans was purchased by Mr. Ludwig Messel nearly 100 years ago; he introduced a rich variety of plants from all over the world. His son, Leonard continued the work and became an enthusiastic hybridiser and his daughter and her husband, the Earl and Countess of Rosse, continued the family interest, introducing many plants from abroad. Lord Rosse, an I.C.S. life member from the Society's early years, died in 1979 but Lady Rosse still lives at Nymans.

Indeed, Lady Rosse was there to greet us individually on arrival and we were all enchanted! Lady Rosse took charge of our party and led us round this beautiful garden, so lovingly planted and maintained. Although a large garden, there is a feeling of intimacy and peace which is remarkable considering the proximity of the main London — Brighton road.

Nymans is famed for its Camellias, Magnolias and Rhododendrons and many were raised here — C. 'Leonard Messel' and 'Maud Messel' and Eucryphia × nymansensis to name but a few.

Nymans is really several gardens, each distinctive and blending into the whole and full of surprises. Pamphlets are issued for each season to ensure the visitor does not miss the highlights of the particular time of year. But we had

Greg Davis

Boyd McRee and Jean Pursel

Greg Davis

Dr. Crézé

no fear of missing anything — our charming guide saw to that!

The walled garden, so secluded, so beautifully designed, the centre paths meet at the Italian Fountain framed by topiary yews. The herbaceous borders here must be a wonderful sight in the summer months.

The Pinetum and Park with its huge Conifers interplanted with Rhododendrons and Eucryphias, the Temple, the Sunk and Heather gardens with a fascinating assortment of quality plants, the Pergola with its amazing old *Wisteria floribunda*; all were admired but our particular interest was in the famous Camellias. Lady Rosse indicated all those in the Wall gardens she brought back as cuttings from Portugal and the new additions from Australia and the famous 'Leonard Messel', a cross made by Lady Rosse's father between C. williamsii 'Mary Christian' and *C. reticulata* 'Captain Rawes'.

Photographs were taken of our group and we all said goodbye to Lady Rosse and enjoyed a welcome cup of tea at the picturesque teahouse near the entrance.

We returned to the Hotel by another country route and our enjoyment of the English countryside was increased by the sight of several cricket matches and a gymkhana.

In the evening, a drinks party was given by our President. This was another opportunity for friends old and new to meet and discuss life in general and Camellias in particular. We enjoyed yet another delicious Dinner and most of us retired early, a little tired and looking forward to the full day's tour the following day.

Wakehurst Place is a National Trust property leased by the Ministry of Agriculture, Fisheries and Food as an addition to the Royal Botanic Gardens, Kew. The soil and terrain of the garden are ideal for many rare plants which do not thrive at Kew.

The house is a grand 400 year old Mansion and has been owned by many families, but the garden itself was largely started by the Boord family — Lady Boord of the 1890s created the Rock Garden which is still a feature today. In 1903 it was sold to Gerald Loder, later Lord Wakehurst, who worked to improve the great natural beauty of Wakehurst Place. The property was bequeathed to the National Trust by its late owner Sir Henry Price in 1965.

Near the house are the usual formal lawns, rock and heath gardens, shrub borders and a pinetum which is approximately 12 acres. There are many interesting conifers here, including the *Pinus patula* from Mexico and *Taiwania cryptomerioides*. Paths lead steeply downward to a wooded valley and a picturesque watercourse linking several lakes and ponds. Most of the New Zealand delegates chose this garden and no doubt they were interested to see the many plants from the southern Hemisphere. In the Border west of the Mansion were *Iris histrioides, Nerine bowdenii* and *Sternbergia lutea, Hedychium, Cautleya spictata* and *Eucomis comosa* L.

The heath garden is divided into a series of beds and here are some of Gerald Loder's original planting from Australasia and South America including *Leptospermum flavescens, Telopea truncata*, various species of *Hoheria*. Here also are several *Cupressus torulosa* and *Athrotaxis selaginoides*, a Tasmanian conifer, *Hakea epiglottis* and *Phyllocladus alpinus*, the Celery Pine.

At the south end of the Heath garden is a border of Lapponicum series Rhododendrons.

Greg Davis

Margaret Scott and Bill Read

Greg Davis

Boyd McRee and Lew & Annabell Fetterman

A walled garden stocked with old fashioned cottage garden flowers in pastel shades has been dedicated to a memorial to Sir Henry Price. At the head of the Slips valley is a stone sundial, erected to the memory of Gerald Loder and his head gardener Alfred Coates. It bears the words:

"Give fools their gold and knaves their power,
let fortunes bubbles rise and fall,
Who sows a field or trains a flower
Or plants a tree, is more than all"
(J. G. Whittier)

High Beeches is the home of the Hon. Edward & Mrs. Boscawen. Our delegates spoke highly of the kind hospitality of their hosts who provided a delicious tea and who personally conducted the I.C.S. Party round this beautiful garden.

"High Beeches" was originally a Loder planted woodland and there are some fine trees, Magnolias, Maples and Camellias — 'Drama Girl', 'Donation', 'Leonard Messel', 'Lady Vansittart'. Mr. & Mrs. Boscawen are keen conservationists and they are encouraging natural plants — for example, orchids — to colonise.

Borde Hill is another garden famed for its Rhododendrons and Camellias, Azaleas and Magnolias.

This was a different type of garden from the others we had seen. There is a large lawn in front of the house with a small woodland to the left and a much larger woodland to the right, with Rhododendrons and Camellias interplanted and enjoying the shelter of the trees. The style is informal and paths meander through woods and glades.

Colonel Stephenson Clarke acquired Borde Hill in 1893. He was a well known amateur plant collector, and it was he who planted the many rare shrubs found here. He produced the Camellia 'Donation' from a cross between *C. japonica* 'Donckelarii and *C. saluenensis* and Salutation' which was a cross between *C. reticulata* 'Captain Rawes' and *C. saluenensis*.

The Camellias seen were excellent although much propagating material was lost in the severe frost of this year. It was very interesting to see the stock plants from which C. 'Donation' was produced.

Monday, 13th May

The day started dull and some rain fell in the early morning. Savill and Valley Gardens was our destination for the whole day. The journey was longer than those of the previous days so we enjoyed a cup of coffee and delicious home-made shortbread on our arrival.

The Savill Garden is part of the Windsor Great Park which is administered by the Crown Estate Commissioners, and is named after Sir Eric Savill, who was at first Deputy Surveyor then Deputy Ranger. It was originally landscaped in the 18th century when the native oaks and beeches were planted; some still remain. Sir Eric saw the possibilities of a natural woodland garden and he was encouraged in his ideas by the Royal Family. The gardens are now 50 years old and are a wonderful testimony to Sir Eric's imaginative landscaping and plantsmanship.

After coffee we were taken by coach to the Valley Gardens, a large area developed after completion of the Savill Garden. Our guide was Mr. John Bond, the Keeper of the Gardens, who gave us an interesting account of the plantings. He emphasized the value of three storey planting: tall trees to provide the shade canopy, or the top storey, strong flowering and foliage shrubs fill the middle storey "the main crop" and the floor of the woodland, the final storey is clothed with ground cover.

Rhododendrons, both species and hybrids, predominate in these gardens and this is the home of the British National Reference Collection of Rhododendron Species as well as that of Magnolias, Hollies and dwarf conifers. A spectacular sight was the Punchbowl — a natural amphitheatre planted with thousands of evergreen azaleas. The Azalea Valley contains hundreds of taller deciduous azaleas including the Knaphill and Exbury varieties, and many bred here at Windsor.

There are two Camellia areas, containing hundreds of williamsii hybrids and japonicas. These must be a marvellous sight earlier in the year: as it was, some were still in bloom due to the late season.

We saw the National Collection of Hollies, Ilex species and cultivars planted a year ago, and then the Heather garden (1950) with a good variety of natural, unclipped plants.

We returned to the coaches and after the long walk, enjoyed our picnic lunch. We next proceeded to the Savill Garden where we spent the afternoon exploring on our own, strolling quietly through the woodland beside the Upper Pond admiring the lovely reflections of the old trees, maples and shrubs and herbaceous waterside plants. On to the Willow Garden, the area first developed by Sir Eric

Savill in 1932. There are hundreds of *Lysichitums* and Primulas and rare Magnolias, Pieris, Mahonias and Corylopsis and large specimens of *Acer palmatum,* 'Dissectum' and Rhododendrons 'Blue Tit', 'Elizabeth' and 'Brocade'.

The Temperate House contains many interesting tender plants including a collection of *Camellia-reticulata,* some Chinese cultivars which came from Kunming in the late 1940s.

Near the Temperate House is a south-facing wall which affords shelter for tender sun-loving plants. This wall was built with bricks salvaged from bombed buildings in London during the war. To quote Lanning Roper, the American garden expert: "Here beauty and life have become the by product of destruction and death".

On to the woodland garden with its wide range of rhododendron species and numerous hybrids and many Camellias. Here we encountered fellow I.C.S. members wandering around examining the vast array of shrubs.

We returned to the Entrance and spent some time in the Shop buying plants, books and souvenirs before boarding the coaches for the return to the Old Ship.

A Banquet was held in the evening in the Ballroom Suite of the Old Ship. We enjoyed a superb meal after which we were entertained by an "Ole Thyme" Group singing old Music Hall Songs, well known to the British, but not so familiar to our visitors. However, everyone joined in singing "Waltzing Matilda".

After this there were speeches and presentations to our retiring President, Mrs Violet Lort-Phillips, by the representatives from the overseas countries.

The President thanked all the delegates for attending the Congress and praised Miss Cicely Perring for making all the arrangements so successfully.

Although the weather was not at its best, it was a most interesting and enjoyable conference and many of us are looking forward to meeting again in Australia in 1986.

The Elephant Camellia

Camellia kissii Wall
(syn. *C. keina* Buch. Ham. ex D. Don)

Le camélia "éléphant" — Camellia kissii

La camelia elefante: C. kissii

La camelia elefante; C. kissii

TONY SCHILLING
Deputy Curator, Wakehurst Place

*see colour section

Camellia kissii a species native to the eastern Himalaya and is recorded from the warm temperate zones of Nepal, Sikkim, Bhutan, Aranachal Pradesh (N.E.F.A.), Assam, Burma, W. and C. China and parts of Indo-China between altitudes of 900-2,200 metres. It flowers in the sunny post-monsoon season between October and November, and its musky fragrant flowers are a frequent delight to those who tread the lowland trails of Nepal and beyond.

The evergreen leaves are elliptic to obovate-elliptic, 5-8 cms long and finely glandular-toothed at the margins. When mature they are a glossy dark green but the young growth is especially attractive, the best examples exhibiting shades close to peach.

The single white erect and almost stalkless flowers are 2-4 cms across and generally solitary and axillary, but somewhat terminally situated on the stem. The obovate petals (usually 4 or 5 in number) are of short duration and the attractive yellow anthered stamens are bunched and very numerous.

In the wild, *C. kissii* is frequently lopped by the villagers for various domestic uses, but if left uncut it will form a laxly-branched small tree or large bush 4 metres tall and half as much across.

The leaves are sometimes used as a substitute for tea by the Nepalese, but it is said to possess only a slight degree of flavour. This is probably due to the casual manner in which the foliage is gathered and dried. The local people also extract an oil from the seeds by pressure and this is valued for its medicinal properties.

(Don's Mill., i. p 676, adapted).

Camellia kissii was originally described by Wallich early in the 19th century and was apparently introduced to western cultivation by a Mr Brookes to the garden of the Horticultural Society.

Plants were subsequently propagated by grafting onto stocks of the single flowered form of *C. japonica* and sold in London for 10 shillings and 6 pence and at Bollwyller for 30 francs. In 1838 it was recorded that stools of the species existed in a cold pit in the Vauxhall Nursery, but owing to its specialist appeal and tender constitution it seems to have been gradually lost to cultivation.

There does not seem to be any further record of its garden cultivation, until I recently re-introduced it from central Nepal; however, I stand open to correction on this point.

On 17 October 1977, whilst leading a tour to the Everest region of east Nepal, I collected a few globular seed capsules (Schilling 2230) from wayside shrubs at an altitude of 1,900 metres. These were later successfully germinated, raised and propagated (by cuttings) at Wakehurst Place. The original plant is currently 1½ metres tall and as much across, and is growing in the Himalayan section of the Temperate House at Kew. Several small plants are also held under glass at Wakehurst Place, and one of these was recently given to Mr John Gallagher who has it in his glasshouse in his Dorset garden.

In Nepal *C. kissii* grows in the company of many other interesting plants including *Viburnum erubescens, Gaultheria fragrantissima, Sarcococca coriacea, Cornus oblonga, Rosa brunonii, Indigofera heterantha, Alnus nepalensis, Luculia gratissima, Osbeckia stellata* and two other members of the *Theaceae* family — *Schima wallichii* and *Eurya acuminata. Rhododendron arboreum* joins the list above 1,500 metres.

In his original description of *C. kissii* Wallich wrote "... which I propose calling *C. kissii the* Newar name being *Kissi* or Kissi-Soah..." Kissi is the Newar name for elephant, but unfortunately the second name Soah (or Swa) does not translate with any real meaning. Vernacular names are of little significant value, but it is nevertheless interesting to record that *in other ethnic regions of Nepal C. kissii* is variously referred to as Kengua, hinguwa (a corruption of the former?), and Chiya Pate which is Nepali for "tea leaf".

As a final note it is worth adding that *C. sinensis,* long cultivated in the Darjeeling and Assam regions of northern India, is also commonly cultivated in eastern Nepal. In that region *C. sinensis* var. *sinensis* can be seen growing in the sub-tropical terai under a protective open tree-canopy of *Shorea robusta* (Sal) and *Bombax ceiba* (The Silk Cotton Tree) between 450-1000 metres or more. *C. sinensis* var. *assamica* can be seen between 1,000-1,800 metres in extensive plantations around the hill town of Ilam. Here it has brought about a thriving economy, the produce being marketed both nationally and internationally.

Several other Camellias (mostly cultivars of *C. japonica*) are grown in Nepalese gardens, especially those of hotels and palaces in the capital city of Kathmandu.

Camellia sasanqua

Camellia sasanqua

Camellia sasanqua

Camellia sasanqua

LESLIE RIGGALL
Kloof, S. Africa See colour section*

All camellias are known in the Far East as "tea flowers" because of their generic relationship with the plant from which tea is made. It is variously believed that the Japanese name *Sazankwa* means, "Mountain tea flower" or "Plum-flowered tea".

The small-flowered original species, which grows naturally only in southern Japan, Okinawa, and islands between, would clearly be too tender for cold climates, and this applies to the superior garden varieties which may have some hybridity from natural crosses, or crosses made by early Japanese growers in previous centuries.

The corollary of cold susceptibility in plants is heat tolerance, and this is why *C. sasanqua* is

much more successful in South Africa than the *C. japonica* varieties which were always grown in the past. At Fern Valley, in our sub-tropical coastal climate, they tolerate full sun.

In addition *sasanquas* have other advantages and virtues. They flower in autumn, thus extending the camellia flowering season by three months. The pests which attack both leaves and flowers of *japonicas* leave *sasanquas* alone. The latter may have some kind of defence against harmful organisms, because they also resist the root-rot fungus *Phytophthora cinnamomi*.

This resistance to a disease which kills so many camellias makes *C. sasanqua* the ideal grafting stock, and it is compatible with every other species except *C. crapnelliana*, which will grow only on its own roots. If you have an important scion it is very advisable to use *sasanqua* stock. It is easy to have a constant supply of such stocks, because *sasanquas* root easily as cuttings, and also produce many seeds. This prolific production of seeds gave rise in Japan to production of a very valuable oil pressed from the seeds, which is used for cooking and the cosmetics industry. All Japanese used to dress their formerly long hair with camellia oil, and also it is used to make face creams, unguents, shampoos, etc. In China *C. oleifera*, a prolific seed-bearer, was used as a source of camellia oil, and this species can be linked with *C. sasanqua* in another way. Like *C. sasanqua, C. oleifera* is resistant to root-rot, and thus it should be the preferred rootstock for *japonicas* which are to be grown in climates which are too cold for *sasanqua* stocks.

The blossoms of *C. sasanqua* are not suitable for cut flowers because they are fragile, but in the garden their profuse blooming creates beautiful carpets of fallen flowers and petals under the trees or bushes, a feature greatly admired by the Japanese.

Another virtue of *C. sasanqua* is the fact that it is fragrant. Although this scent is less attractive when one smells a flower at close quarters, the fragrance on the air near a bush is delightful.

Sasanquas come in all shapes and sizes, tall or dwarf, tightly compact or open, upright or willowy, and some are prostrate enough to use as ground cover. Most varieties have very pliable stems, thus they are very easy to train, whereas the stiff stems of *C. japonica* are much more difficult, and *reticulatas* are even more stiff. I did come across an exception to this many years ago in America, where one man was growing *C. japonica* 'C. M. Wilson' in hanging baskets. This is a sport of *C. j.* 'Elegans', and he claimed that all mutations of 'Elegans' would weep if the leader was cut out. No doubt there is scope for more experimentation with *japonicas*, which are extremely variable because of their hybrid origins.

However, *sasanquas* are certainly best for espaliers and hanging baskets because the stems are so flexible, and the smaller leaves and flowers give a more elegant effect. The tall upright varieties are excellent for framing gateways, doors, and vistas through the garden.

Another advantage of *sasanquas* is their tolerance of soil conditions which are not adequate for *japonicas*. In such situations one can grow not only *sasanquas,* but also *japonicas* if they are grafted on *sasanquia* stocks.

C. hiemalis is closely related and all the above comments would apply to it. The various cultivars may be hybrids of *C. sasanqua,* or merely different forms of it, but one cannot go wrong by treating them as *sasanquas.*

No doubt readers would like some guidance as to which varieties to grow, so I will suggest some varieties which are outstanding performers at Fern Valley. All these varieties are fragrant.

C. sasanqua

'Narumi-Gata'. Named for Narumi Bay, a famous beauty spot of Japan, this more cold-hardy variety is one of the oldest sasanquas known to the West, and succeeded against sunny walls even in England. It has often been distributed as *C. oleifera,* and the plant of this name which I planted in my species collection turned out to be 'Narumi-Gata'. In the same collection I had a plant labelled *C. drupifera* which had to be re-labelled *C. oleifera.* When such confusion is worse confounded by staff who move the labels (sometimes a long distance), chop the labels with machines and hide the evidence, or simply bury the labels when weeding or mulching, and visitors who are overcome by an irresistible urge to steal the labels even though they are useless to them, and children who take a devilish delight in mixing up the labels, one despairs of ever having a garden properly labelled.

However, to return to 'Narumi-Gata', this is an upright growing, open tree which displays its individual flowers very well. For this species they are very large, the shape and size of a champagne glass, white with a tinge of fus-

chine pink (Royal Horticultural Society, Horticultural Colour Chart No. 627/2, or R.H.S. Fan 63C) at the ends of the large petals. The flowers have very strong fragrance, and the breeding potential is excellent.

'Crimson King'. This is another old favourite, having arrived in the West many years ago. It is better than most of the new reds, and is surpassed only by 'Bonanza'. The brilliant, single, seven-petalled flowers are a rich red colour (H.C.C. 025 to 025/1, or Fan 63C to 63B) contrasting with bright golden anthers. This variety is tall and upright in habit, and should be in every *sasanqua* collection.

'Bettie Patricia'. A plant of medium spreading growth, it bears profusely lovely semi-double flowers, very pale pink washed with rhodamine pink (H.C.C. 527/2 to 527/3, or Fan 65B to 65C), which have a few petaloids. It is one of our best camellias, and is highly recommended to those who like soft pink flowers.

'Jean May'. Very similar to the previous cultivar in all respects, except that the growth is more compact. This one would be very good as a screening plant.

'Rainbow'. This does not grow tall and is very compact, making a dense solid mound of dark green foliage. The seven-petalled (average) single flowers are large, white with showy deep red margins (H.C.C. 627 to 627/1, or Fan 66B to 66C). Would be excellent for a small garden or a situation in which a taller plant would be undesirable.

'Setsugekka'. This is one of the best whites, an old variety like 'Mine-No-Yuki', but without the latter's horrible habit of covering itself with dead flowers. The flowers have rippled and fluted petals and good fragrance, and the growth habit is typical *sasanqua* and very vigorous.

'Ko-Gyoku'. An upright growing cultivar, with formal double flowers which resemble small roses. They are very pretty, pale blush sharply contrasting with rose-red outer petals (H.C.C. 627/1 to 627/2, or Fan 73A).

'Papaver'. The growth is moderate, open and upright. The large single flowers resemble poppies, very pale pink shaded with tyrian rose (H.C.C. 24/3, or Fan 62C) with strong fragrance.

'Exquisite'. Is very similar to the above, except that the pale flowers are delicately washed with phlox pink (H.C.C. 625/3, or Fan 62C to 62D), and it has better growth.

'Bonanza'. This is undoubtedly the best red. The flowers are an intense glowing crimson (H.C.C. 26/1, or Fan 67B) with peony-shaped centre petals and some bright anthers. The petals are waved and fluted. My new plant is only four feet (120 centimetres) high but it is said to grow to a medium height. If this is correct 'Bonanza' should be in every garden, large or small.

'Sparkling Burgundy' With typical elegant growth and small dark green leaves, this is a popular variety with deep pink (H.C.C. 025/1 to 025/2, or Fan 64C to 64D) peony flowers. Recently my plant laid a beautiful pink carpet of fallen flowers on the ground. Blooms of this American variety are said to be better if shaded from full sun. But one must remember that all *sasanquas* need sunlight.

C. hiemalis

'Showa-No-Sakae'. The lovely pure pink (H.C.C. 025/2 to 025/3, or Fan 75A to 75B) peony type flowers hold their colour in full sun, the high centre petals mingling with golden anthers. The willowy growth is suitable for hanging baskets, espaliers, or could even be trained as ground cover. In the latter case one would merely have to remove the vertical shoots and leave the horizontal branches.

'Showa Supreme'. This is similar to the above but more vigorous. Thus if one wanted an ordinary plant in the garden, not for any of the special purposes mentioned above, a choice between the two could be made according to the size of the garden.

'Chansonette'. A bushy plant with moderate sized formal double lavender-pink flowers. Such flowers are unusual within the *sasanqua* group.

'Kanjiro'. Known as 'Hiryu' in Australia, this superb garden plant is fast growing, upright, tall and compact. Thus it can be used as a specimen tree, or screen, or windbreak. The deep cerise (H.C.C. 26/1 to 26/2, or Fan 67B to 67C) petals shade to a paler colour in the centre of each petal, framing the golden anthers and showing occasional petaloids. 'Kanjiro' has all the virtues desired in a stock plant, and we are

striking cuttings each year, for use as stocks for grafting all species four years later.

If one raises *sasanqua* seedlings for stocks, it is not a bad idea to let them flower before beheading them. We have a delightful seedling which has achieved the rare distinction of being planted in our Japanese Garden.

Guanshan Shumuxue (Study of Ornamental Plants)

Etude de plantes ornementales

Estudio de plantas ornamentales

Uno studio delle piante ornamentali

CHEN, CHIH

Shanghai, 474 pp. 1955d

From a translation of the sections on Camellias by Jan Ke Ang.
Edited and footnotes by T. J. Savige, Wirlinga, Australia.

Commonly called "Shan Chahu'" (Mountain Camellia Flower), or "Chahua" it is also known as "Naidonghua" (Winter enduring flower) Chahua in the Guangdong Province, or "Shouxing Cha" (God of Longevity Camellia) in the Sichuan Province. In the *Manual of Flowering Plants* published during the Ching Dynasty (1644-1911) it was called "Manduoluo".

It is a member of the Theaceae family. Leaves alternate, leathery, ovate or elliptic-ovate; apex tapers off; base cuneate, 5-12 cm long, surface dark green, smooth, glabrous and shiny; edge serrate. One to three flowers borne at the tip of the stem or in the leaf axil; complete flower, white to red, 5-6 petals with sometimes up to 60 petals and petaloids developed from the stamens. Flowers, erect, sessile; sepals, 5-6 or more, imbricated, irregular, deciduous. The difference between the flower of tea and Camellia is that the former is pedicilate, nodding, sepals persistent. Flowers from the end of winter until spring. (In Kunming, Yunnan Province, the flowers open from November until March of the following year). Fruit, woody capsule, matures at the end of Autumn, but in the cases where the sexual flower parts have metamorphized into petals, no fruit develops.

According to Wang, Xianjin's *Qunfangpu* (Flower Manual, 1621), there are numerous varieties, several of which flower in the winter.[1] They are:

1. Heding Cha... (Crane's crest Camellia). The flowers are as big as a waterlily, red as blood; the compact centre resembles the top of a crane's head. It comes from the Sichuan Province.[2]
2. Damanao... (Cornelian). Red and white and comes from Wencheng, a city in the Zhejiang Province.[3]
3. Baozhu Cha... (Jewellery Camellia). Leafy, bushy habit; petals, deep in colour but lacking form.
4. Guifei Cha... (Yangguifei is the full name and refers to the Concubine of a Tang Dynasty Emperor. She was noted for her beauty and thus her name is applied to anything that is beautiful). Simple form, early flowering, crimson; sepals, dry and dark.[4]
5. Baizhu Cha... (White Jewellery). This resembles 'Baozhu Cha' except that the petals are white; blooms very early, fragrant and lovely.[5]
6. Zhenggongfen and Saigonfen... (Zhengongfen was the central palace occupied by the Empress while Saigongfen is a similar name for the minor palaces occupied by the concubines). The Camellias are pink in colour.
7. Shiliu Cha... (Pomegranate Camellia). Red like a pomegranate.[6]
8. Hailiuhua... (Dwarf Pomegranate). Small flower.[7]
9. Cailiu Cha and Zhizhu Zha... (Rhododendron). Flowers, bright red.[8]
10. Zhenchu Cha... (Pearl) and Chuanzhu Cha (Rosary). Flowers crimson.
11. Yun Cha... (Yun is an abbreviated name for the Yunnan province); 'Qingkou Cha',[9] (Empty mouth Camellia); 'Moli

Cha', (Jasmine Camellia); 'Yiniehong Cha',[10] (One bundle); 'Zhaodianhong', (Shrine red), bright red.

In ancient literature, the *Hejingshizu*, it is recorded: "In camellias the big ones are called "Yuedan" (Moon red). Bigger ones are called 'Zhaodianhong'. 'Qianyebai', (Thousand petal white),[11]; 'Qianyehong', (Thousand petal red). The leaves of all these vary. There are also flowers yellow in colour.

'Paochu', (Jewellery) is very good but 'Su Cha', (Sichuan Camellia) is even better.

The author, Yu Duoying said "Baochu Cha" has a double flower and blooms for months, bright red in colour and is very lovely. In the middle parts of Yunnan Province there were Camellias 20-30 feet tall that bore thousands of flowers as big as a peony.[12]

In the book *Geigulun* it is written: "There are many Camellia varieties such as 'Baozhu Cha'; flowers like pearls; blooms vigorously; 'Hailiu Cha' with green sepals. In this "Shiliu Cha" group there are 'Suihua', 'Zhizhu Cha' with flowers like Rhododendrons; 'Gongfen Cha', (probably same as item 6 above), 'Chuanzhu Cha', both pink coloured and other varieties like 'Yineihong', 'Qianyehong' and 'Qianyebai'. It is hard to enumerate all of them. Leaves vary a little from variety to variety; amongst them are yellow ones." (Probably yellow variegated leaves).

Numerous varieties of Camellias have been mentioned in Japanese literature. According to *Kandan Komoku* (Flower classification) published between 1673-1680, there were 66 varieties. In the *Chikinsho*, which was published in the 8th year of Genroku (1695), there are listed 205 varieties. In the *Korai Tsubaki Nayose*, published about 1810, there were 223 varieties while Ito, Kozaemon, author of the *Chinkashu*, which was published in the 12th year of the Meiji Dynasty, lists about 200 varieties.

There are numerous varieties in China concentrated in the Yunnan Province. It was a great contribution by Professor T. T. Yü who classified and identified the Camellias of that Province. Following are the classifications for the Chinese *C. japonica* and *C. reticulata*.

I. Shan Chahua (*Camellia japonica* Linn.) Also called "Zhuan Chahua" in the Sichuan Province or "small Camellia". Evergreen shrub; leaves ovate to elliptic-ovate, surface, dark green, shiny; edges serrate. The flowers are red or white, diameter 3-9 cm.; ovary glabrous. Originated in South-East China and Japan. Several hundred varieties have been cultivated. Following are the important ones:

A. Baiyang Cha... (White Ocean Camellia). Synonym: 'Qianyebai', (Thousand petal white). This is also known as 'Alba Plena'. Corolla resembles a rose; petals, flat, 6-10 whorls; inner, smaller, imbricated, stamens, rare; almost all developed into petals; flowers, pure white.

B. Shiyangjing... (Ten or many forms). Also called "Shiyangjin" by Yü. Many flowers. Blooms resemble 'Baiyang Cha', but crimson with white streaks or white with red streaks.

C. Youxuehong... (Fish blood red), (var. "Yusuehung", Yü). The flower resembles 'Baiyang Cha, but dark red. The outer whorls have white spots.

D. Yangguifei... (var. 'Anemoniflora', Curtis).[13] Yangguifei is the name of the mistress of a Tang Emperor as described previously when the name was given as "Guifei" instead of Yangguifei. Yang was her family name and is often not used. The variety is also called "Hong Chahua" (Red Camellia) and the flower resembles the Autumn Peony. The petals of the outer whorl are broad and flat while the inner are small, broken and irregular; stamens, rare; flower, crimson.

E. Xiaowuxing... (Small five star), (var. "Hsiawusin" Yü). The name refers to its pentagonal shape. Corolla resembles 'Yangguifei'; flower, crimson with occasional white specks; stamens in 3-5 groups within the broken inner whorl of petals.

Zhudinghong... (Vermilion superb red). The flower resembles 'Yangguifei'; spinel-pink in colour; stamens, essentially none.

G. Meigui Chahua... (Rose Camellia var. "Magnoliaeflora". Also called "Yulan Chahua", (Magnolia Camellia)). Flowers, rose coloured, almost double. Petals, 12-15, tapered at apex.[14]

II. Nanshan Cha... (Southern Camellia). (*Camellia reticulata* Lindl.). Also called "Dianchahua", (Yunnan Camellia) or "Dachahua", (Large Camellia). Evergreen woody plant; bark greyish brown;

leaves elliptic, ovate or ovate-lanceolate, 7-12cm. long; surface dull dark green; veination, conspicuous; edges, serrate; flower colour from light red to dark purple; diameter, 8-16 cm. Flower, large; colour, bright and beautiful; ovary covered with short hairs. It is popular especially in Yunnan and Guangtong Provinces. Seventy two varieties were mentioned in ancient literature but only 18 are common.

A. Juban... (Chrysanthemum Petal), var. "Tsueban" Yü). Leaves curve upwards, corolla resembles that of a rose; petals flat, 6-9 whorls, arranged regularly imbricated; stamens, rare; flowers, pink; diameter 8-12 cm.

B. Songzilin... (Pine cone scales), (var. "Sungtzelin", Yü). Also called "Songziko", (Pine cone husk). Leaves, flat; corolla resembles 'Juban'; flower, bright red; diameter, 11-12cm. It is named because the arrangement of the petals resembles the scales of a pine cone. Blooms February to March.

C. Zipao... (Purple gown), (var. "Tzepao", Yü). Petals, flat; corolla resembles 'Juban'. Flower, large, purplish red, very popular. Occasional flowers that have white streaks on inner petals are called "Zipao Yutai", (Purple Gown with a White Belt).[15]

D. Hentiangao... (Hate sky too high), (var. "Hentienko", Yü). Dwarf variety, slow growing; corolla resembles 'Juban'; flower, double, pink, with edge of petal, whitish; diameter, 9-11 cm. Blooming period may be as late as the end of April. One of the most prized varieties in the Yunnan Group.

E. Xiaoguiye... (Small Osmanthus leaf), (var. "Hsiaokueiyeh", Yü). Leaves curve upwards, lanceolate; one of the smallest leaves in all the Yunnan *reticulatas*. The flower resembles a peony; petals, wavy, 3-6 whorls, irregularly arranged; stamens, fairly numerous; flower, pink with a bluish tint. Late flowering.

F. Daguiye... (Large Osmanthus leaf), (var. "Takuieiyeh", Yü). Leaves curve upwards, ovate-lanceolate; corolla resembles 'Xiaoguiye'. Flowers, pink; stamens, few.

G. Dayinhong... (Large spinel pink), (var. "Tayinhung" Yü). Leaves, flat, long elliptic to elliptic; apex, short pointed); veins, less conspicuous; midrib, hairy on underside; corolla resembles 'Xiaoguiye'; flower, light pink.

H. Maye Yinhong... (Reticulate leaf light pink), (var. "Mayehyinhung", Yü). Leaves, flat; long elliptic to ovate-lanceolate; apex acuminate; veins, conspicuous; underside of leaf, smooth and glabrous; corolla resembles 'Xiaoguiye'; flower light red but darker than 'Xiaoguiye'.

I. Liuye Yinhong... (Willow leaf spinel pink), (var. "Liuyehyinhung", Yü). Leaf, flat; broad-ovate; base, rounded; veination, shallow; flower resembles 'Xiaoguiye, midrib on underside of leaf, hairy; flower, light red.

J. Dataohong... (Large crimson), (var. "Tataohung" Yü). Leaf, broad-ovate; base rounded; veination, shallow; flower resembles 'Xiaoguiye', 3-4 whorls, crimson; darker than 'Xiaoguiye'; stamens, numerous.

K. Zaotyaohong... (Early crimson), (var. "Tsaotaohung", Yü). Leaves, elliptic to elliptic-ovate; base, obtuse to rounded; veination, shallow. Corolla resembles 'Xiaoguiye'; petals in 3-4 whorls; flowers, crimson but lighter than 'Xiaoguiye'; stamens, numerous. Blooms early.

L. Mudan Cha... (Peony Camellia), (var. "Mutancha", Yü). Leaves, long elliptic; base wedge shaped; veination, deep. Corolla resembles 'Xiaoguiye'; petals 5-6 whorls, more complicated than 'Xiaoguiye'; pink in colour; stamens numerous, blooms late.

M. Houye Diechi... (Thick leaved butterfly wings), (var. "Houyehtiechih", Yü). Also called "Yinhong Diechi", (Spinel butterfly wings) or "Fenhua Diechi", (Pink butterfly wings). Leaves, long elliptic-ovate; base, wedge shaped; veination, shallow; corolla resembles 'Xiaoguiye'; flowers, pink; stamens, numerous, divided into 3-8 bundles dispersed amongst wavy petals.

N. Maye Diechi... (Reticulate leaf butterfly), (var. "Mayehtiechih", Yü). Also called "Fenhong Diechi" or "Yinhong Diechi". (Note: the second

synonym is exactly the same as for the preceding variety). Leaves, long elliptic; base, rounded or broad, wedge shaped; veination, deep. Corolla resembles 'Xiaoguiye'; flower, pink; stamens, few, mostly developed into petals. Blooms late.

O. Dalicha... (Yunnan Province), (var. "Talicha", Yü). Leaves, flat, long elliptic to elliptic-ovate. Corolla resembles 'Xiaoguiye'; flowers, intense, light pink; stamens, numerous, united or partly united at base and surrounding the pistil.

P. Baozhu Cha... (Jewellery Camellia), (var. "Paochucha", Yü). Also called "Baozhu Shancha". Leaves, flat, broad-ovate to obovate. Corolla resembles 'Xiaoguiye'; flowers, intense, bright pink; stamens, numerous, 4-9 groups dispersed amongst wavy petals.

Q. Shizitou... (Lion Head), (var. "Shihtzetou", Yü). Leaves curved upwards, long elliptic to long elliptic-vate. Grows rapidly; flowers late.

R. Damanao... (Large Cornelian), (var. "Tamano", Yü). Leaves and flowers resemble those of 'Shizitou'. Flowers are bright red with white blotches.[19]

Twenty years ago, (early 1900's ed.) there were only 4 or 5 species of the Yunnan Camellias recorded in botanical literature. Through investigation, collection and research of both Chinese and foreign botanists, more than 20 species have been discovered.[22]

1. Nanya Chahua... (South Asian Camellia), (*C. confusa*, Craib.). Flowers, white; leaf, large,long elliptic-ovate. Occurs in southern Yunnan near the towns of Zhuli and Lushun. Also occurs in Burma, Thailand and India.
2. Feidiao Chahua... (Fat twig Camellia), (*C. crassipes*, Sealy). Flower, white; leaves, ovate; apex tapers gradually. E. E. Maire collected this at Long Dragar Street, Kunming. (Probably the address where the collector obtained his specimens, ed.)
3. Shuili Chahua... (Name of a river in the Yunnan Province), (*C. distinctissima* Sealy). Flower, white; leaves, long elliptic. Forrest collected this on the Shuili river.[20]
4. Fushi Shancha... (Fushi is the chinese version of pronouncing "Forrest", ie the first syllable of Forrest's name as family name). (*C. forrestii*, Stuart). Flower, light creamy white; leaves, ovate. Found near the town of Shunlin in Yunnan.
5. Henglin Shancha... (*C. henryana* Stuart), (Chun). Flowers, light creamy white; leaves, ovate; apex tapers gradually.
6. Yiye Shancha... (hetero leaf Camellia), *(C. heterophylla*, Hu)[16]. Flower, red. There are two types of leaves; those borne on young branches differ from those on old branches. Leaves, apex, acute or rounded; general form resembles *C. reticulata.* Wang, Chi-won collected this from a Temple in the town of Shunling.
7. Zurui Shancha... (Thick short stamen Camellia), (*C. pachyandra,* Hu). Flowers, small, white; leaves, long ovate; filaments, short and thick.
8. Pishi Shancha... ("Pishi" is the Chinese version of pronouncing "Pitard"). (*C. pitardii,* Stuart). Also called "Yeshan Cha" (Wild Camellia) in Kunming city. Grows wild in Yunnan and along the borders of Sichuan and Guizhou Provinces. Flower, spinel pink; leaves ovate-lanceolate with long pointed apex. Grown in the temple gardens around Kunming. During the Chinese new year (in February) they are sold as cut flowers in the flower market.
9. Zarui Shancha.... (mixed stamen Camellia), *(C. polygama,* Hu). Leaves,elliptic; apex, rounded or slightly pointed; flower, white with degenerate stamens. Found in Wenshan.
10. Nujiang Shancha... (Name of a river), *(C. saluenensis,* Stapf.). Flower, crimson; leaves, ovate-lanceolate; apex resembling *C. pitardii.* Occurs along the valley of the Nujiang, a river in western Yunann.
11. Herngchei Shancha... (Probably the name of a person), *(C. sophiae,* Hu).[21]. Flowers, White; leaves, long ovate. Occurs in Shiping. (place name).
12. Sidu Shancha... (Chinese version of Stuart), *(C. stuartiana,* Sealy). Occurs along the Yuanjiang, river in Yunnan.
13. Heding Shancha... (close top Camellia), *(C. synaptica*, Sealy). Flowers, white; leaves, ovate with long acuminate apex.
14. Dali Shancha... (name of town in Yunnan), (*C. taliensis,* Smith). Leaves resemble "Puer Cha" but flowers larger, pure white. It may belong to the same species

as "Puer Chá". Found near Dali and Tengyue.[17]

15. Tengshi Shancha... (*C. tenii*, Sealy). Flowers, small, white; leaves, ovate; apex, slightly pointed or rounded. Found near Yanjing.
16. Zaishi Shancha... (*C. tsaii* , Hu). Flowers, white; leaves, ovate-lanceolate. Found in the western region of Lujiang. (a river)
17. Zengbian Shancha... (Place name) (*C. tsingpiensis,* Hu). Flowers, small, white; leaves, ovate-lanceolate; apex with pointed tail; ovary, smooth. Found near Pingbian.
18. Wenshan Shancha... (Place name), (*C. wenshanensis,* Hu). Flowers, small, white; leaves, ovate-lanceolate; apex, tapers gradually; ovary, hairy. Found near Wenshan, a town in Yunnan.
19. Yunnan Shancha... (Name of Province), *(c. yunnanensis,* (Pitard) Stuart). Leaves ovate; apex, tapers gradually. Found in western Yunnan Province. Evergreen shrub or woody plant; height up to 10 metres. Bushy habit. One tree which is growing in the courtyard of the temple, Tai-hua-szu is believed to have been planted personally by Emperor Chian-Wen (1399-1402 reign) at the beginning of the Ming Dynasty.

The two old trees in Daihegong (Old Imperial Palace) were believed to have been planted during the reign of Wan-Li (1573-1619). One red Camellia and five Osmanthus trees in the courtyard of the temple Tai-hua-zsu, which was built in 1008 A.D. near the eastern suburb of Kunming City, are believed to have been planted during the same dynasty. The tree is about 20 metres tall and blooms every spring with many thousands of flowers as big as a plate, each resembling a peony.[18]

Footnotes

1. The Camellias from Wang, (1621) would all seem to be cultivars of *C. japonica* although in some cases the same names have been used for cultivars of *C. reticulata,* namely: 'Damanao', 'Baozhu Cha' and 'Heding Cha'. These names were also usedby Fang, Shumei, (1930).
2. Yü, (1964) gave the name 'Hedinghong' to a *C. japonica* cultivar and Feng & Shi, (1966) to a *C. reticulata* cultivar. Therefore, because it is not certain that "Heding Cha" (Wang) is a *C. japonica,* Yü and Bartholomew, (1981) gave this name to the *C. reticulata* cultivar, reserving 'Hedinghong' for the *C. japonica.*
3. 'Damanao' here seems likely to have been a *C. japonica* as its origin is outside the normal *C. reticulata* range.
4. Both "Guifei Cha" and "Yangguifei" would seem to be variations of the name "Yangfei Cha", Ichijima, 1906. "Zuiyangfei" (Intoxicated Yangfei), Fang, (1930), would also appear to be the same. Priority would lie with 'Guifei Cha', Wang, (1621).
5. This would seem to be the same as "Baibaozhu", Fang, (1930). The descriptions are the same.
6. 'Shiliua Cha' (Pomegranate Camellia), Fang, (1930). Colour fiery red with central petals like a freshly split pomegranate. Also listed by Li, (1590).
7. 'Hailiuhua', (Dwarf pomegranate), Fang, (1930). Green calyx, colour pomegranate red, petals fragmented. Also listed by Li, (1590).
8. 'Cailiu Cha', (Edible pomegranate Camellia), Fang, (1930). Similar to 'Zhizhu Cha'. Colour bright red. Also listed Li, (1590).
9. The name 'Qingkou' is being used for a new *C. reticulata.* (Feng et al, 1981).
10. 'Yiniehong'. This is the same as "Yinianhong", (Wang & Yü, 1981) although the centre character is different, "nie" meaning "pinch" against "nian" meaning "twist"; the two words have a nearly similar import.
11. 'Qianyebai' is believed to be one of the Chinese names for 'Alba Plena'. Chen, Yung, (1937) also gives "Baichhua".
12. This appears to be referring to the *C. reticulata* cultivar.
13. It is interesting that "Yangguifei" has been equated with 'Anemoniflora' as the Reeves painting gives the Chinese name of 'Anemoniflora' as "Baozhu Cha" and Chen, Yung, (1937) gives the name "Hong Chahua" (Red Camellia) as var. 'Anemoniflora' Curtis.
14. "Meigui Chahua" is given "Magnoliaeflora" as a synonym. This was also repeated by Chen, Yung, (1937). Its other synonym, "Yulan Cha" has recently been given to a *C. reticulata* cultivar. Yü & Bartholomew, (1981).
15. As this is a random marking and not stable it cannot be classified as a separate cultivar.
16. Heterophylla means "differing leaves" here referring to the different forms of leaves on the old and new branches. *C. heterophylla* is treated as a cultivated form of *C. reticulata* by Chang (1981). However Western Taxonomists have established that it is a hybrid *C. reticulata* × *C. japonica.*
17. Puer Cha or Pu-erh-cha is a form of *C. sinensis* var. *assamica.* This large leaf form is the basis of the Assam teas although Chang, (1981) considers this as close to the original wild form of the tea plant. In-Chang's hierarchy, both *C. taliensis* and *C. sinensis* are placed in Subgenus "Thea", Section, "Thea".
18. This seems a little exaggerated even though the plant referred to is obviously *C. reticulata.*
19. 'Damanao' is a white blotched, virus affected form of 'Shizitou'.
20. This species seems to be an error as Sealy makes no mention of a *C. distinctissima* in his Monograph, (1956).
21. *C. sophiae,* Hu has been equated with *Tutcheria spectabilis* by Sealy.
22. Chang, (1981) lists 64 species and 5 varieties as indigenous to Yunnan, quite an increase since 1955.

Bibliography

Bartholomew, B., 1982. Tiannan Chahua Xiazhi and the Old Camellia *reticulata* Cultivars from Yunnan, China. *American Camellia Yearbook, 1982,* pp. 147-155.

Chang, Hung Ta. *A Taxonomy of the Genus Camellia,* 1981. Acta. Sci. Nat. Univ. Sunyatseni, monogr. ser. 1:1-180.
Chen, Yung, 1937. *Chung Kuo Shu Ma Fen Lei Hseueh, pp. 808-815, Shanghai.*
Fang, Shumei, 1930, *Tiannan Chahua Xiaozhi.* (An account of the Yunnan Camellia).
Feng, Kuo-mei and Shi, Zongming, 1966: *Yunnan shanchahua Zhiwuxue fexing ji hauxing de tantao.* (Plant introduction and domestication), 2:105-113.
Feng, Kuo-mei; Xia, Li-fang and Zhu, Xing-hua, 1981: *Yunnan Shanchahua,* (Yunnan Camellias). Nipon Hoso Shippan Kyokai, Tokyo.
Li, Shizen, 1590, *Bencao Gangmu,* (Materia Medica with commentaries). commercial Press, Hong Kong. (1930 ed.)
Liu, Tsu-ming, 1959, *Chung Kuo Chu Ming Ti Chi Chung Hua Hui,* (Several famous ornamental plants of China); 129 pp.
Savige, T. J. and Bartholomew, B., 1983; Some notes on the "Tiannan Chahua Xiaozhi", *American Camellia Yearbook,* 1983, pp 131-134.
Sealy, Robert J., 1956; *A Revision of the Genus Camellia,* The Royal Horticultural Society, London.
Wang, Xianjin, 1621; *Qunfangpu,* (Thesaurus of Botany) n.p. (1630 ed).
Yü, Te-tsun, 1950; *Camellia reticulata* and its Garden Varieties. In: Synge, P.M.ed. *Camellias and Magnolias Conference Report.* The Royal Horticultural Society, London; pp. 13-66.
Yü, Te-tsun, 1964; The Garden Camellias of Yunnan. In: Griffin, Frank, ed. *Camellian,* 1964, pp. 29-108.
and Bartholomew, B. 1980; The origin and Classification of Garden varieties of *Camellia reticulata. American Camellia Yearbook,* 1980, pp. 1-29.
and Feng, Yaozong, 1958; *Yunnan Shanchahua Tuzhi,* (Illustrated account of the Yunnan Camellias); Science Press, Beijing.

The French Camellia enthusiasts - who are they?

Les amateurs français de camélias — qui sont-ils?

Los aficionados franceses a las camelias — quiénes son?

Gli amatori francesi delle camelie — chi sono?

M. JEAN LABOREY
Paris, France

Readers of this publication who don't know France may perhaps be surprised by the article they are about to read. In effect, it emphasizes how different the tastes of the French camellia enthusiasts are from those of their American, Australian and New Zealand colleagues. Yet on the other hand, in the use we make of our gardens, it demonstrates how close we are to the Japanese and also to our traditional European neighbours the English, the Italians and the Spanish. We are different even in the very nature of our organisation, instead of a powerful 'Camellia Society', specialising solely in all that concerns Camellias, we French enthusiasts form only one specialised section of our 'Société Nationale d'Horticulture'. It is inconceivable that a French gardener should plant only Camellias in his garden; he wants colour all the year round - or at least nearly all the year round; he wants different blooms to follow on from each other and he tries to bring to his garden the wonderful abundance of nature. What can this 'Section Camellia' offer those in France with an acid or neutral soil and a climate which permits the cultivation of camellias? The 'Collection Nationale', in Nantes, has the peculiarity of being in two parts. One is open to the public and has been planted in the town's botanic garden; the other, approximately the same in size and containing a similar richness of species and preserved cultivars, is planted in Claude Thoby's nurseries at Carquefou on the outskirts of Nantes. Both collections maintain most of the traditional varieties, but they are also enriched by nearly all of the species and cultivars which - after trials in Europe - can be cultivated in our climate. Also to be found there are the first crosses obtained by Professor Ackerman, who is trying to produce camellias which are reistant to the cold, thanks to the use of *Camellia oleifera.* These two collections act as reference gardens, and allow the enthusiasts and garden managers, upon request, to breed those species and cultivars which particularly interest them.

Reference gardens

We put forward a proposal to the public gardens of towns in areas of France where Camellias can be grown that a collection of seventy of our most popular cultivars should be planted in locations easily accessible to the public. The local populace can choose designated varieties, thus enlarging the range of colours and forms, all too often restricted, and find out how to grow them. The professionals, who used to offer only a choice of red, pink or white camellias, thus find themselves forced to label their plants. These gardens also permit invalu-

able studies on their performance in cold weather or in excessive summer sunshine in those areas often prone to severe winters or very hot and dry summers. To this day, the botanic gardens of eight large towns have their 'Jardin de Référence Camellias'.

The camellias in the 'Conservatoire Botanique' in Brest

Brest, situated at the extreme western point of Brittany, enjoys a climate which is not dissimilar to that of Cornwall in England. This town has been chosen as the location for a 'Conservatoire Botanique'. It has just been decided to plant a collection of the largest number of species of camellias that can possibly flourish in this climate. Around each species will be exhibited the main hybrids obtained. For example, around a *Camellia saluenensis*, will be planted the most well known hybrids produced by crossing with *Camellia japonica, Camellia reticulata* etc.

The exhibitions

There is nothing comparable with the exhibitions we have been able to see in Georgia, California or New Zealand, countries where flowers are shown cut and without foliage, and where, it seems, the largest flowers are prized. Our exhibitions only show flowering plants brought on in containers, the concern of the exhibitor being to demonstrate the ways they can be used in the garden. Every two years, in close collaboration with the 'Service des Parcs et Jardins' of Paris, the 'Société Nationale d'Horticulture' and our 'Section Camellia' organise in March an exhibition of Camellias lasting for a week. The principal camellia nurseries take part, bringing large flowering plants and the town of Nantes presents part of its collection in the form of bouquets. Demonstrations of the use of Camellias in floral art, commentaries and conferences always attract a gathering of interested enthusiasts. In 1984 the city of Paris recorded eighteen thousand paying entrants.

In April of each year a camellia festival is organised at the Parc de Trevarez in Northern Brittany. The nursery growers bring numerous flowering plants to the heart of an important and already long-established plantation of tall camellias. This festival lasts three days and also attracts a considerable gathering of enthusiasts, happy to follow demonstrations of grafting and the taking of cuttings. These procedures are a result of a definite increase in the choice of different varieties here in Brittany, where for decades even the smallest garden has had at least one camellia.

We don't have a publication of our own, but each year in February/March "Jardin de France", the monthly magazine of the "Société Nationale d'Horticulture", gives over half its pages to information entirely devoted to camellias, to their cultivation, to all the latest developments, and to news of our activities. In this magazine we summarise, in translation, the most important topics discussed in the journal produced by the I.C.S. which is only subscribed to by those of our members who are also part of this association and who are capable of reading English. Reading this "I.C.S. Journal", written entirely in English, is practically impossible for the majority of our members who have an imperfect knowledge of English. This is a considerable obstacle in the recruitment of new members to the I.C.S., something of which our camellia-loving friends in Italy, Spain and the Benelux countries are also aware. The distributors of the I.C.S. Journal must be made to realise this in order to overcome the problem.

We differ still more from other countries in that almost all the camellias produced in France are obtained from cuttings and very rarely by grafting.

Finally, another difference should be pointed out which relates to our climate. The coldness of our Springs only rarely allows the fertilization of camellia flowers; consequently the yield of seed is small and there is no possibility of practising hybridization except in a greenhouse, the method used by some of our more fortunate English neighbours. It is this climate, where the winters are severe enough to arrest the growth of our camellias completely for almost five months of the year, which is responsible for a rate of growth which is much slower than in Australia or California (where the plants grow two or three times more quickly). Therefore it became apparent that we had to eradicate the virus which weakens certain of our varieties far more than in other countries where growth is almost continuous. This accounts for the work undertaken by our President, Dr Jean Crézé and for our surprise - at the last Brighton congress - to hear an American tell him that he considered this effort to be pointless since in his opinion the virus gave the foliage of camellias an added appeal! We, on the other hand, along with our English friends, think it desirable to have, in the future, camellias which are free from virus and which will thus regain their former vigour.

We distinguish ourselves still further by the preference shown more and more by the French camellia enthusiasts for plants with unelaborate flowers, whose beauty, in their opinion, is also enhanced by quite prominent clusters of stamens. Like the Japanese, we tend to dislike camellias whose flowers are too big, for they seem out of proportion with the bush which bears them and it is, after all, in the garden that we admire them.

Such are the French camellia enthusiasts. It is clear that we are different, yet we are still eager to bring our distinctive views to the I.C.S.

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Les amateurs français de camellias: Qui sont-ils?

M. JEAN LABOREY
Paris, France

Le papier qu'on va lire surprendre peut-être les lecteurs de ce journal qui ne connaissent pas la France. Il souligne en effet combien les goûts des amateurs français de camellias sont différents de ceux de leurs confrères américans, australiens ou néo-zélandais; combien par contre nous sommes proches - dans l'utilisation que nous en faisons dans nos jardins - des Japonais, mais aussi de nos voisins de la vieille Europe: Anglais, Italiens, ou Espagnols. Différents, nous le sommes déjà dans la façon de nous grouper - au lieu d'une puissante "Camellia" Society uniquement spécialisée dans tout de qui touche aux camellias, nous autres amateurs français nous nous groupons seulement *dans une section spécialisée de notre Société nationale d'Horticulture.* Il est inconcevable pour un jardinier français de ne planter que des camellias dans son jardin; il le veut fleuri toute l'ánnée, ou presque, il veut que des floraisons différentes s'y succèdent, et essaie de transposer dans son jardin la merveilleuse liberté de la nature. Cette "Section Camellias", qu'apporte-telle à tous ceux qui, en France, ont un climat et un sol acide ou neutre, leur permettant de les cultivar? D'abord, *"la collection nationale"*, elle se trouve à Nantes et a la particularité d'être en double. L'une est ouverte au public et a été plantée dans le jardin botanique de la ville; l'autre à peu-près équivalente en nombre, et quant à la richesse des espèces et des cultivars conservés, est plantée dans les pépinières de Claude Thoby à Carquefou, aux portes de Nantes. Toutes deux conservent la plupart des variétés anciennes, mais elles se sont enrichies

aussi de presque toutes les espèces et cultivars qui - après essais en Europe - peuvent y être cultivés sous nos climats. On y trouve aussi les premiers croisements obtenus par le professeur Ackerman, tendant à obtenir des camellias résistants au froid, grâce à l'utilisation du *Camellia oleifera*. Ces deux collections servent de référence et permettent de multiplier à la demande celles des espèces ou des cultivars qui intéressent plus particulièrement des amateurs où les responsables de nos jardins de référence.

Jardins de référence

Nous avons proposé aux jardins publics des villes situées dans les régions de France où l'on peut planter des camellias, d'y planter dans une partie facilement accessible au public, une collection de 70 cultivars parmi ceux qui sont les plus populaires chez nous. La population locale y trouve la possibilité de choisir des variétés dénommées, d'élargir ainsi la gamme, trop restreinte souvent, des couleurs et des formes et de se renseigner sur leur culture. Les professionnels qui souvent encore offraient seulement le choix de camellias rouges, ou blancs ou roses, se voient ainsi poussés à les vendre sous étiquette. Ces jardins permettent aussi des observations précieuses sur le comportement au froid ou à un ensoleillement trop fort l'été, dans les régions soumises à des hivers quelquefois rigoureux au à des étés très chauds et secs. A ce jour, 8 jardins botaniques publics de grandes villes ont leur "jardin de référence Camellias".

Les camellias au conservatoire botanique de Brest

Brest, situé à l'extrême pointe ouest de la Bretagne, jouit d'un climat presque comparable à celui de la Cornwall Anglaise. Aussi cette ville a-t-elle été choisie pour y implanter un "conservatoire botanique" Il vient d'être décidé d'y planter la collection du plus grand nombre des *espèces* de camellias que nous pouvons espérer voir prospérer sous ce climat. Autour de chaque espèce, seront présentés les principaux hybrides qu'ils ont permis d'obtenir et, par exemple, autour d'un *Camellia saluenensis*, ceux des hybrides les plus notoires produits par son croisement avec les *Camellias japonica, Camellias reticulata* etc.

Les expositions

Rien de comparable avec les expositions que nous avons pu voir en Géorgie, en Californie, ou en Nouvelle-Zélande, pays où l'on expose des fleurs coupées san feuillage, et où l'on prime surtout semble-t-il, les fleurs les plus énormes. Nos expositions de montrent que des plantes élevées en conteneurs et fleuries, le souci de l'exposant étant de montrer la place qu'elles peuvent prendre dans un jardin. La Société nationale d'horticulture et notre section camellia, organisent tous les deux ans, en collaboration étroite avec le Service des Parcs et Jardins de la ville de Paris, *une exposition de camellias en mars*, d'une durée d'une semaine. Les principales pépinières de camellias y participent, en apportant de grandes plantes fleuries, et la ville de Nantes y présente, en bouquets une partie de sa collection. Des démonstrations d'utilisation des camellias dans l'art floral, des commentaires et des conférences attirent un public toujours très intéressé d'amateurs. En 1984, la ville de Paris y a enregistré 18,000 entrés payantes.

Un festival du camellia est organisé au parc de Trevarez

en Bretagne-nord, en avril de chaque année, où les pépiniéristes apportent de nombreuses plantes fleuries au milieu d'une très importante plantation déjà ancienne de camellias de grande taille. Ce festival dure trois jours et attire lui aussi un public important d'amateurs heureux de suivre des démonstrations de greffage, de bouturage qui sont à l'origine d'un renouveau certain dans le choix des nouvelles variétés dans cette Bretagne où le moindre petit jardin a, depuis des décennies, au moins un camellia. *Nous n'avons pas de journal* mais chaque année en Février-Mars, "Jardins de France" le journal mensuel de la Société nationale d'horticulture, ouvre la moitié de ses pages à une information entièrement consacrée aux camellias, à leur culture, à tout ce qui est nouveau les concernant et à l'annonce de nos actitivés. Nous y résumons, *après traduction*, l'essentiel des sujets traités dans *"l'I.C.S." journal* que seuls reçoivent nos membres faisant aussi partie de cette association et capables de lire l'Anglais. La lecture de ce "Journal I.C.S." entièrement rédigé en anglais, est pratiquement impossible à la plupart de nos membres connaissant imparfaitement l'anglais. C'est un frein considérable au recrutement de nouveaux membres à l'I.C.S., et que connaissent aussi nos amis camelliophiles italiens, espagnols et du Benélux... Il faut que les dirigeants de notre I.C.S. en soient bien conscients, eux, pour que ce problème n'existe pas. Nous différons encore beaucoup d'autres pays dans le fait que la presque totalité des camellias produits en Fr-

ance sont obtenus par bouturage et, très rarement, de greffage. Il nous faut enfin signaler une autre différence qui tient à notre climat: la fraîcheur de nos printemps ne permet qu'assez exceptionnellement la fécondation des fleurs de camellias; aussi n'avons-nous que très peu de fructifications et donc pas de possibilité de pratiquer l'hybridation autrement qu'en serre comme le font quelques une de nos voisins anglais fortunés. C'est à notre climat où les hivers sont assez marqués pour provoquer chez nos camellias un arrêt total de végétation de presque 5 mois, que nous devons d'avoir une végétation bien plus lente qu'en Australie ou en Californie (où les plantes poussent 2 à 3 fois plus vite que chez nous). Aussi nous-est-il apparu nècessaire de supprimer les virus qui affaiblissent certaines de nos variétés bien plus qu'ils ne le font dans des pays où la vegetation est presque continue. D'où les travaux entrepris par notre président le Dr Jean Crézé, et notre étonnement - au dernier congrès de Brighton - d'entendre un Américain lui dire que cette lutte lui paraissait inutile car le virus était, à son avis, un attrait de plus sur les feuillages de camellias! Avec nos amis anglais, nous pensons, au contraire, qu'il sera bon dans l'avenir d'avoir des camellias exempts de virus, dont nous retrouverons ainsi la vigueur. Nous nous singularisons encore par le goût que manifestent de plus en plus les Français amateurs de camellias, pour ceux qui ont des *fleurs simples* ainsi que pour ceux dont un pinceau plus ou moins important d'étamines, augmente à leur avis, la beauté. Comme les Japonais, nous tendons à rejeter les camellias à fleurs trops grosses qui ne nous paraissent pas à l'échelle de l'arbuste qui les porte puisque c'est dans le jardin que nous les admirons. Différents on le voit, tels sont les camelliophiles français et la place un peu particulière qu'ils tiennent à prendre dans l'I.C.S.

The twenty-first Galician Camellia Show

La 21éme Exposition Galicienne de Camélias, Espagne

La XXI Exposición Gallega de la Camelia

La 21ª Mostra Galiziana della Camelia

ROBERT GIMSON
Pontevedra, Spain

As those members of the ICS who came to the Conference in Galicia know, a camellia show is held, usually at the end of February or beginning of March each year, in one of the three principal cities of the province of Pontevedra. This year was the turn of Villagarcía de Arosa on Saturday and Sunday, 9th and 10th of March, in the *Pabellon de Liceo Maritimo,* which was much better than the *Polideportivo,* the venue three years ago; the latter was then a new building with a tinted glass roof, which made the red camellias appear to be black and the whites yellowish green, (and made the ladies' make-up most unattractive).

Tom Savige wrote about the Vigo show "The presentation was quite different from shows seen in other countries." (Savige 1981). The presentation at the 1985 show was the same, and there were 6 classes for flowers: a) white; b) pink; c) red; d) variegated; e) *reticulata;* f) a mixture of all three, and there were prizes for flower arrangements, colour photographs and postage stamps depicting camellias. Most of the competitors do not keep to the rules, and display a mixture of all colours but enter them under the separate colour classes. There is no rule that the exhibitor may show only his or her own flowers, so florists, and maybe others, buy flowers to show. The exhibitors are mainly those who have inherited large gardens with old camellias and most of them are the same each year, so the half-day before the show allotted for them to arrange their displays is like a club of old friends, although some of them may not see each other until the show in the following year. The judges are locals, and this year the panel was strengthened by the appointment of Dr Santiago Castroviejo, the Director of the Madrid Botanic Garden.

There are lots of prizes, most of them are silver-plated dishes and cups, but the top prize is a pure gold brooch, the *Camellia de Oro,* the stem of a camellia with a flower and leaves of superb craftsmanship; the dishes and cups are

presented by local firms and banks, and I calculated that this year over half the exhibitors received a prize. The prize giving is held, usually, at the end of the show, and a dozen or so local dignatories stand in a row on the stage, and take it in turns to present the prizes.

Coming from old gardens most of the flowers are not named, and this year the japonica cultivars which were shown did not vary much from previous years, and Tom Savige gave the list (Savige 1981), to which I would add 'Alba Plena' and 'Fimbriata'. This year a lady showed *C. rosaeflora*, which she told me she had bought in London as *C. sinensis*, so who are we, English, to criticise the Spaniards for not knowing the names of their plants? *C. reticulata* 'Captain Rawes' has been available for over 110 years from Portuguese nurseries, so there are some large trees in Galicia, and the flowers are in many displays. Two or three exhibitors have imported some of the new *reticulata* hybrids and cultivars. This year a young lady arrived in a leopard-skin coat and announced that she had a plant of *C. chrysantha*, but it had not flowered yet.

The shows are one of the popular events of the year, and from opening to closing time there is a milling crowd. They have become even more popular in the last few years, as the host municipality has engaged dancers, bagpipers, choirs, etc. to perform on the stage during part of the opening time of the shows.

References

SAVIGE, T. J. 1981. Camellias in Galicia in International Camellia Journal, *13*.

The Yellow Camellia

Le camélia jaune

La camelia amarilla

La camelia gialla

MILTON H. BROWN
U.S.A.

(A paper given at the I.C.S. Congress, Brighton 1985)

(*See Colour Section)

Madam President and members of the International Camellia Society, I would first like to thank the President and the Executive of the International Camellia Society for permitting me to present this paper to such an august group.

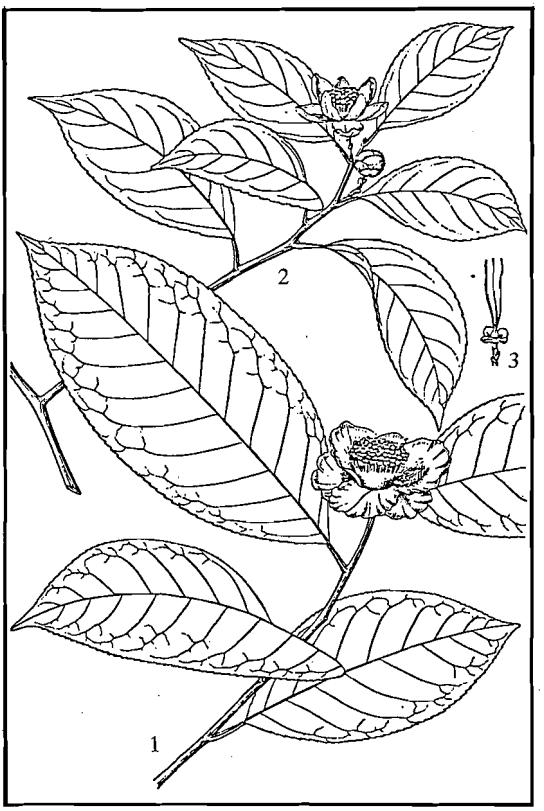
Camellia hybridisers from all over the world have long desired to cultivate camellias with flowers of peach, yellow, orange or various shades in between. This dream may soon become reality due to the efforts of camellia lovers from both sides of the world.

Rumours of the yellow camellia in southwest China and northwest Vietnam have abounded for four or more decades. The 11th Panpacific Science Congress was held in Bangkok in November, 1947. Prior to that time the late Ralph Peer, then President of the American Camellia Society, contacted a Japanese delegate, Takasi Tuyama, to see if he would be able to find out something about the yellow-flowered camellia described by French botanists, and to see if it could be introduced outside its native habitat. Peer felt camellia horticulture would be greatly aided by hybridizing a yellow camellia with the species then prevalent in the West. Mr Peer enclosed a cheque "of not so small amount" to assist Professor Tuyama. These were difficult times in Vietnam. Tuyama flew to the east end of Tran Ninh Plateau and started on foot northward with a porter, a guide and a pony which Professor Tuyama said might have looked a "poorest Don Quixote". Unfortunately, he could not get to where the yellow camellia was blooming and the only camellias he saw were *Camellia sinensis assamica.* Tuyama describes his quest for the yellow camellia as an absolute failure.

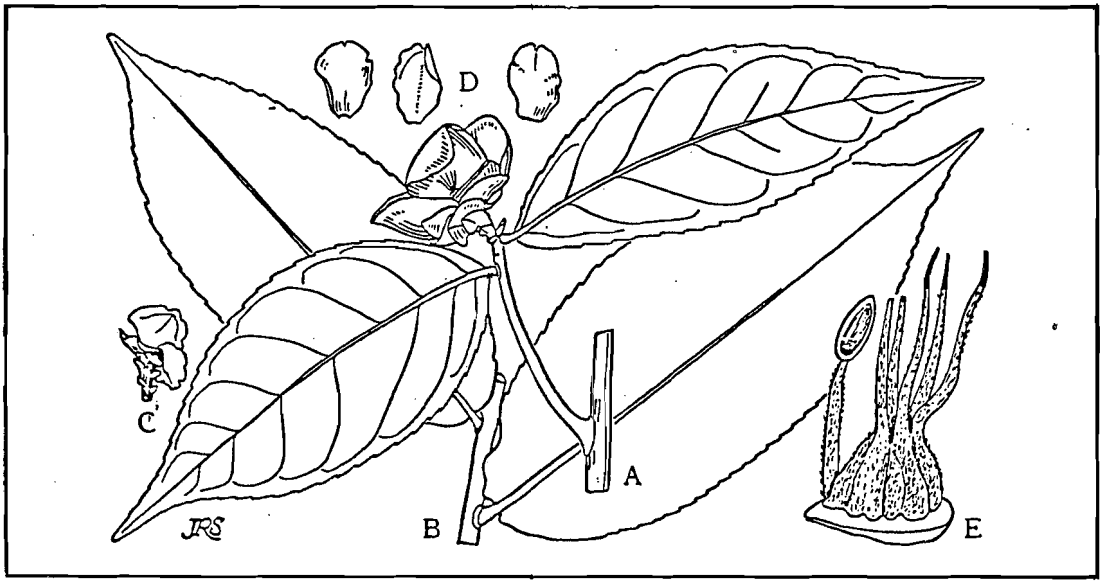
A few years later he was in Paris and, at the herbarium of Museum d'Histoire Naturelle, he examined the type specimens of the yellow camellia *C. flava.*

In 1965, *Theopsis chrysantha* Hu, a golden-flowered "tea plant", as it was called by the late Professor Hu Hsien-Hsu, was published in Peking. In the article Hu says, "This fascinating plant has rather large fragrant, golden-yellow flowers,... has very high horticultural value, as it may be used to hybridize with other varieties..." The flowering specimen had actu-

Camellia chrysantha (Hu) Tuyama
1. flowering branch; 2. capsules.



1. *Camellia euphlebia* Merr. ex Sealy
2-3. *Camellia tunghinensis* Chang
1-2. flowering branches; 3. calyx and pistil.



C. *flava;* A. twig with flower after corolla and androecium have fallen; B. part of leafy shoot; C. pedicel and part of calyx; D. sepals; E. gynoecium and one stamen × 6; A-D. natural size; A. after a drawing by Stella Ross-Craig of *Pitelot 6387*; B-E. from *Bon 2831*.

ally been collected by the Kwangsi Pharmaceutical Institute in Nanning City on 15 December 1960. Hu's article did much to spur on the interest of camellia hobbyists throughout the world. In October, 1975 Professor Tuyama proposed the new name *Camellia chrysantha (Hu) Tuyama* in the *Journal of Japanese Botany* 50: 299. In May of 1979 two new varieties of *C. chrysantha* were described by Drs. Mo Sin-Li and Huang Se-Zei in *Acta Phytotaxonomica Sinica 17: No. 2* as var. *microcarpa* and var. *macrophylla.* The first-known coloured picture of the *C. chrysantha* in the Western World was published in the American Camellia Society *Camellia Journal* Vol. 34, No. 4 in 1979.

In the early summer of 1976 the ACS made a modest amount of money available to a Chinese-American botanist for a plant exploration trip to the People's Republic of China. It was our hope that he would search out plant material of the yellow camellia since he was going to the Yunnan Province. There was no after trip to the ACS, but we did learn that he had no success, apparently, in getting any material of the yellow camellia.

In his book *A Revision Of The Genus Camellia,* J. Robert Sealy of the Royal Botanical Gardens Kew described *C. flava* (Pittard) Sealy in Kew Bull, 1949, p.217 as being yellow and *C. euphlebia* Merrill *(M.S.)* Ex. Sealy in Kew Bull, 1949, p.216 as being sulphur yellow with fragrant flowers. He does point out that it was not possible to soak up a flower and the description and dimensions of the parts are from the dry material.

Professor Chang Hung-Ta published a manuscript in Chinese in 1981 in China. It is the most significant account of camellias since Sealy's Review of 1958, now outdated, and bears all of the imprints of Professor Chang's firsthand knowledge of camellias and their natural habitat. Professor Chang lists in his Section 9 *Camellia luteoflora* as being yellow. Dr. Bartholomew believes that the very small yellow flowers of *C. luteoflora* may prove to be a more important species for breeding yellow colour into other camellias than the yellow camellia species listed in his section Chrysantha.

We now have in the Western World what people believe to be *C. chrysantha* var. *microcarpa* and var. *macrophylla* and *C. euphlebia.* However, the prevailing thought is that *Camellia chrysantha* var. *macrophylla* is actually *Camellia euphlebia.* As you can see, we still have many species of the yellow camellia still to break through the "Camellia Curtain" set up by Beijing. We must await blooming of the yellow camellia plants now prevalent in most camellia growing areas to check their colours to see which species they might be and also to check what is called *C. euphlebia* to see if it is fragrant as it was described by Dr. Hu.

There have been various reports as to who was responsible and when the yellow camellia came out of the People's Republic of China. There are some definitive points, however, which can be made.

On 8 November 1979 a group of Japanese visited Kunming, under the leadership of Dr. Takasi Tuyama. While there, he was able to obtain from Dr. Zhang Aoluo, then the Vice Chief of the Kunming Botanic Garden, and Xia La-fang and Mr. Shun Shion-Hong, two important members of the Camellia team at the Kunming Botanic Institute, two scions and seeds of *C. chrysantha.* These were the first that were permitted out of China.

Dr William L. Ackerman, then the Research Horticulturist at the U.S. National Arboretum, and Executive Director of the ACS, had been in correspondence with Professor Zhang Aoluo for more than two years in an attempt to obtain germ plasm of *C. chrysantha.* On January 21, 1980 Dr. Ackerman received five seeds. Due to his extensive work with the Chinese in the field of botany and his close personal relationship with key Chinese botanical officials, Dr. Bruce Bartholomew, then of the University of California at Berkeley Arboretum, likewise obtained five seeds. We understand it was about this time that Tom Savige in Australia received five seeds also.

Each of these two learned Americans were able to bring to fruition four plants each in America. There was some consternation at first about these seeds as each seed was composed of an embryo and four rather than the customary two cotyledons. From these eight seeds hundreds of plants are now growing on at various institutes, universities and private gardens in this country and in others.

In order to bring some order out of chaos and to have some sort of central information bank on the current and ongoing activities concerning the yellow camellia, the ACS through its Research Horticulturist, Betty Hotchkiss, has established such an information bank. The ACS was given a generous grant by an overseas horticultural fund to carry on this work over a 3-year period. There have been several cooperators who are very generous in their information. Unfortunately, within our hobby

Camellia pingguoensis Fang
1. flowering branch; 2. fruiting branch and flower bud; 3. leaf detail.

there are some who, as the poker player says, hold their cards close to their chests in an effort, hopefully, to surprise the other players around the table. Fortunately, such people are few and most people in our hobby are forthcoming and most willing to share their knowledge.

Camellias have a long history of cultivation. Over 3,000 varieties of *C. japonica,* the most widely grown camellia species in the United States and Europe, have been developed in shades of pink red or white or combinations of these. Most varieties are bred by means of intraspecific hybridisation among a few species. Most of this is by open pollination. Breeding to introduce new colours can only be achieved by "Distant Hybridisation" which introduces advantageous genes from a new species. In this respect, breeding of *Camellia chrysantha*, the yellow camellia, with varieties presently cultivated has the potential of introducing new colour combinations while retaining many of the desirable traits of the varieties currently grown.

The American Camellia Society is taking an active part in this endeavour to obtain a "colour breakthrough" in camellias. I as its Executive Director, and Betty Hotchkiss, the Horticulturist, are promoting cooperation of all camellia hybridisers involved in this endeavour. In this respect, a letter was sent from Mrs Hotchkiss in June 1984, to all camellia hybridisers known to have plants of *C. chrysantha* in an effort to establish an information bank.

Information was received from cooperators in the United States, Australia, England, Italy, South Africa and Japan. Two additional letters have been sent to cooperators since that time. Our group of correspondents now contains 29 members. Anyone who has plants of *C. chrysantha* and is interested in sharing information regarding culture and hybridisation efforts is invited to join this group of cooperators by writing to Mrs Hotchkiss, American Camellia Society, P.O.Box 1217, Fort Valley, GA, U.S.A.

The American Camellia Society has also been responsible for the exchange of much information about *C. chrysantha* both through the quarterly *Camellia Journal* and the *Yearbook*. *The Camellia Journal* published the first colour picture of *C. chrysantha* in the Western World in the November, 1979 issue. Beginning with the November, 1979 issue there have been 10 articles about *C. chrysantha* published in *The Camellia Journal* and three articles in the *Yearbook*. These publications were sent to the members of the ACS, numbering over 4,500 in 44 states and 22 overseas countries.

In the United States, a number of camellia enthusiasts have plants of *Camellia chrysantha.* Propagation and distribution of plants has been a primary concern for many who have plants. Dr William Ackerman, retired from the U.S.D.A. Plant Introduction Station, has distributed plants to 16 people in the U.S., 3 in England, 3 in France and 1 in Germany. Many of these have been at the request of the American Camellia Society. One nursery has had many plants for sale. It obtained plant material from several sources and keeps meticulous records on plants from each source.

Only two camellia growers in the United States (that we are aware of) had a plant of *C. chrysantha* to flower during the 1983-84 season. One of these growers had a few blooms in the late spring. The pollen from these blooms one grower generously shared with hybridisers in California and the Headquarters of the American Camellia Society.

Very little hybridising with *C. chrysantha* was done in the U.S. during the 1983-84 season. In the winter of 1983-84 ACS received a small amount of pollen from Japan. Several crosses were made onto *C. japonica* flowers but none was successful. This pollen was divided with another hybridiser on the East Coast who produced one seed on a *C. re-*

ticulata hybrid. Pollen was also brought back from Japan by another hybridiser on the East Coast. He had some 250 pollinations onto *C. reticulata* and at this report has 119 seedlings of *C. chrysantha* hybrids, some now grafted on large understock to speed bloom. ACS also received pollen from the West Coast in the spring of 1984. No crosses were made with this until 1985 as it was too late in the season in Georgia for blooms. A hybridiser on the West Coast also received pollen from a source in Japan during the 1983-84 season and has produced seedlings from these crosses of *C. japonica* × *C. chrysantha.* At this point, we do not know how much hybridising has been done in the U.S. during the 1984-85 season.

The ACS Horticulturist made 213 crosses this year with 12 seed capsules forming at the time of this writing. These are from crosses made onto both *C. japonica* and *C. reticulata.* The very newest information that we have is rather encouraging. The 12 successful seed pods at Massee Lane are progressing on *C. reticulata* and *C. reticulata hybrids* and *C. japonica.* The developing seeds are three on 'Royalty', one on 'Pavlova', one on 'Hongwan Cha', one on 'Terrell Weaver' and one on 'Four Winds' - and four on *C. japonica* 'Charlie Bettes' and one on the japonica 'Elizabeth Boardman'.

One cooperator in Northern California made 48 crosses this year of which at this time (April 16, 1985) 7-8 are holding on. It is too early to start counting chickens - a similar number all failed last year. The biggest and best pod is on 'Lasca Beauty'.

Another Northern California cooperator had 17 pods on *C. chrysantha* of which 13 flowered. He has made 150 crosses using the pollen on *reticulatas, japonicas* and hybrids and a few on some fragrant seedlings. He has 15-16 pods at this time (April 16, 1985) that look very good and he sees no reason why they should abort. They are mostly on the *C. japonica* 'Mrs Bertha A. Harms' and on his own introduction of *C. japonica* 'Pirouette'.

Another Northern California cooperator who has 4 hybrid seedlings on crosses he made last year made 68 crosses this year. On April 13 it appeared that 45 were coming. On April 19 he said it looks as if only 28 are and "no doubt more will have to be crossed off". The successful pods that appear pretty likely are on *C. japonica* 'Rosary', his own seedling #257 (*C. japonica* × *C. reticulata* hybrid that seeds well), a *C. saluenensis* × *C. japonica* 'Debutante', *C. japonica* 'Coronation', *C. japonica* 'Kingyo-Tsubaki' (Fishtail), *C. japonica* 'Frank Gibson', his own #7 (a dwarf pink *C. japonica* × *C. reticulata* hybrid), *C. japonicas* 'Lady Vansittart' and 'Mrs Bertha A. Harms' (these are repeaters from last year), a *C. pitardii* seedling and probably a few others.

The American Camellia Society has 11 plants of *C. chrysantha* from different sources but they did not produce any blooms this year. We received pollen in January 1985 from an eastern U.S. garden that we used for our hybridisation efforts and distributed to camellia hybridisers on both the east and west coasts of the U.S., Great Britain and New Zealand.

In China, as early as 1958, the Kunming Botanical Institute set forth the goal to cultivate camellias of new colours. In 1973, the Institute obtained the first batch of seedlings by hybridisation with pollen of *Camellia chrysantha.* Since then, hybridisation has been carried out each year. In 1978, the hybrid seedlings began to bloom. Pollen was collected from *C. chrysantha* plants growing in the wild and kept in refrigerators. Viable pollen was placed on flowers of *C. reticulata, C. japonica, C. pitardii* var. *yunnanica* and *C. saluenensis.* Seedlings were produced from crosses onto *C. reticulata* and *C. pitardii* var. *yunnanica.* A higher percentage of successful seedlings was produced from crosses made with *C. reticulata* than with *C. pitardii* var. *yunnanica.* Out of 456 seeds, 228 seedlings were produced. Many of these had poor growth, grew very slowly, and did not form fibrous roots. Only 39 larger seedlings were obtained out of the original 228. The colour of the flowers of these plants remained reddish in colour.

In Australia, plants of *C. chrysantha* have been used extensively for propagation. Two nurseries were expected to have plants of *C. chrysantha* for sale this year. A nursery in Sydney, New South Wales, made about 70 cutting grafts in December, 1983. It was noticed in March, 1984 that 10 of these formed flower buds. However, as vegetative growth began on these grafts, the flower buds withered. The vegetative buds were immediately pinched on the remaining grafts and four plants produced flowers of *C. chrysantha.* On August 16, 1984 the first bud opened. The flowering period continued until mid-September and 15 flowers in all were produced. A limited amount of hybridisation was done using this pollen, but the results are not known by us at this point.

The Royal Horticultural Society's Garden in Wisley, England has 8 young plants obtained

from sources in the United States. None of these have flowered to date. The American Camellia Society sent pollen of *C. chrysantha* to the Director in early 1985 for hybridisation suggesting he use *C.* × *williamsii* × *C. chrysantha.* No results are in at this point.

One cooperator from Milan, Italy reports he is the only camellia grower in Italy to possess plants of *C. chrysantha.* He has three plants, none which have flowered.

In Japan, several camellia growers have bloomed *C. chrysantha* and began hybridising as early as 1981. Some Japanese breeders are having very good success, while others not so good. At least one hybridiser has flowered a hybrid of *C. chrysantha.* The flowers are stalked (as those of *C. chrysantha*) and pink with a slight orangish tinge. Another hybridiser made 473 crosses with *C. japonica, C. rusticana* and *C. reticulata.* Of these crosses 124 seeds were produced but only 5 seeds actually germinated. Most seeds were imperfectly formed. A higher percentage of *C. reticulata* seeds germinated than either of the other species.

At the Tokyo Camellia Show in March 1985, Nurserymen had *C. chrysantha* plants for sale. One nurseryman friend has had plants for sale for more than two years. He brought a plant to ACS and to Dr Sevesi of Milan, Italy at the ICS Congress in Sacramento two years ago. The 10-16 inch plants in Tokyo were being sold for 2000-3000 yen ($7.50-$12.00); large plants 4-5 feet tall were offered for sale at $200-$400. One plant on display was 6 ft. tall and had at least 20 blossoms (2-2½ inches) of a buttercup yellow. The Japanese graft *C. chrysantha* mostly onto *C. japonica* and *C. sasanqua* rootstock. *C. reticulata* is rarely used.

A cooperator in South Africa now has 5 plants of *C. chrysantha.* None of these plants have flowered at this time as they are very young.

Information gathered concerning the culture of *C. chrysantha* is still fragmentary and much needs to be done in this field. These plants do not appear to tolerate too much sun and prefer almost complete shade. The plants also will not tolerate cold weather and have a tendency to drop their leaves if exposed to the cold. It has been mentioned that *C. chrysantha* is sensitive to high levels of zinc in the soil. Propagation of this species appears to be fairly easy. Cuttings have been rooted successfully and plants on their own roots have survived. Successful grafts have been made onto *C. sasanqua, C. japonica, C. reticulata* and *C. reticulata/japonica* hybrids.

Hybridisation presents some problems in obtaining seed capsule development. The Japanese have observed that survival of young seedlings that do develop is a problem. Some young seedlings made an initial spurt of growth and then go into a state of decline. It is not known whether this is a delayed effect of incompatibility or improper growing environment. Those people most successful provide shade to the seedlings.

The propagation of camellias through tissue culture, or cloning, of plants is an exciting prospect. Betty Hotchkiss, ACS Horticulturist, attended a short course at the University of Tennessee on tissue culture. She and Dr Johnny Carter from Fort Valley State College received a grant in February 1985 for $30,000 to develop techniques for commercial propagation of camellias through tissue culture. Propagation through tissue culture should prove to be both cheaper and faster than traditional methods of propagation. The development of these techniques should coincide with the development of new colour hybrids of camellias through hybridisation with *C. chrysantha.* These techniques will ensure faster and cheaper distribution of plants to the public.

To show you how continuous is our information bank, I am going to quote from a letter received only a very few days before we left to come to this Congress. It is from a new Japanese cooperator. This person's hybridising programme was basically supported by the information given by the staff of the Kunming Institute of Botany who visited Japan as follows:

(1) F1 hybrids (*C. reticulata* × *C. chrysantha*) have so far had no yellow flower, possibly and presumably because of the anthocyanin in the flower of the female plant.

(2) Hybridisation of *C. saluenensis* × *C. chrysantha* and *C. japonica* × *C. chrysantha* have generally resulted as incompatible. Though fruited, inside of the seeds was hollow and sometimes jellied.

(3) Buds obtained from hybrids made with pollen of *C. chrysantha* are seen on both sides of auxiliary growth buds of the branch grown in spring and flowers have their pedicels the same as *C. chrysantha.*

This person first selected as female parents *C. japonica*, a single white. The seeds were non-fertile. The person stated that the reason for this is not clear because of short experience and noted some differences. *C. chrysantha* has

from 3-5 cotyledons, pedicels and blooms on both sides of the auxiliary growth bud whereas *C. japonica* has 2 cotyledons, no pedicels and blooms on the tip sprout. It is also noted that when the growth bud grows in the spring and the branches become strong the buds on both sides of the auxiliary growth bud are getting bigger; as the tip sprout of the branch grows, the buds fall down one by one. As to culture of the F1 hybrids, the growth bud after fruiting on the female parent *C. japonica* were mostly cut off. A little Magamp K was used for fertiliser a few times. The plants were kept fully watered and never let dry. This condition permitted the fruits to develop leaving only 2-3 fruits as being adequate, as too many will check the vitality of the seeds and, perhaps, make them not fertile. Thus the fruits were completely matured in mid-September. The seeds after being taken off and sterilised were sown and kept at a temperature of 20-25°C as this type hybrid likes high temperatures and humidity. This spring, three years after germination, 7 of the hybrids had flowers. Unfortunately, these flowers (F1) were not yellow, but 4 white and 3 blush pink. One of the blush pink flowers had a pedicel. The fact that the cotyledons of the hybrids when germinated were black-purple would certainly seem to prove that they were undoubtedly *C. chrysantha* hybrids. The diameter of the flowers was 2".

Now two kinds of hybridisation, Hybrid F1 × Hybrid F1 and Hybrid F1 × *C. chrysantha* are being carried out. The fruits are gradually getting fatter. As this person says, "I hope I could have a success in producing F2."

A very interesting point was raised by Leslie Riggall of the Fern Valley Botanic Garden in South Africa. He reported that the Head of the Department of Genetics at the University of Witwatersrand said in part, "I think you are probably on the right track in trying to introduce the yellow into white flowered species or cultivars. It would be useful to know something about why the white flowered parents you hope to use are white. Different kinds of flowers are white for different reasons. Some lack pigment and others have pigments which show up as white or ivory colour. Do you happen to know what the yellow pigment in the *C. chrysantha* is chemically? The breeding approach might be different for different classes of pigments e.g. xanthins, carotenes, etc. Various classes of pigments can interfere with each other so it might be desirable to test for the presence of some of these substances before expending a lot of effort on crosses that might not give the desired results chemically."

She then goes on to another problem of, "a complicated biochemical pathway requiring a whole group of enzymes working coordinately... extremely unlikely through sexual reproduction."

Mr Riggall says that he proposes to "leave that one alone" and concentrate on discovering what is the chemical nature of the yellow pigment of *C. chrysantha"*. He says he has no flowers for a chemical test as yet but hopes that this information may be available from hybridisers in Kunming or Japan or America. He feels that this information would certainly be very favourable in knowing what crosses to make and what might bring about a reasonable chance of success. We hope to have answers on this available in our publications soon. Drs Ackerman, Bartholomew and Parks have been asked to see if they can come up with some answers to the conclusions drawn by Professor van Schaik of the University of Witwatersrand.

The prospects for the future are bright. As more plants of *C. chrysantha* are distributed throughout the world the greater the opportunity for hybridisation. Through hybridisation, new colours can be developed that until now have never been seen in camellias. Through tissue culture these new hybrids may be propagated and sold to the public faster and more reasonable in price than ever before. *A new ERA in camellia culture is just around the corner.*

References

ACKERMAN, William L., "The Yellow Camellia *(C. chrysantha)* comes to the United States", *The Camellia Journal,* American Camellia Society, Vol. 35, No. 3, August 1980, pp.32-34.

CHANG, HUNG-TA, *A Taxonomy Of The Genus Camellia,* 1981.

CHANG, HUNG-TA and BRUCE BARTHOLOMEW, *Camellias,* 1984, pp.128-136. In this book under Section XIV, Section *Chrysantha*, Chang lists the following as Yellow Camellias: *C. flava* (Pitard); *C. aurea* Chang; *C. chrysantha* (Hu) Tuyama; *C. flavida* Chang; *C. impressinervis* Chang & Liang; *C. euphlebia* Merr. ex. Sealy, *(C. chrysantha* var. *macrophylla)* Mo. & S. Z. Huang; *C. chrysanthoides* Chang; *C. tunghinensis* Chang; *C. pingguoensis* Fang; *C. pubipetala* and *C. luteoflora.*

HAGIYA, DR. KAORU, "Interspecific Hybridisation of Camellias Using *C. chrysantha* Pollen", American Camellia Society, *The Camellia Journal* Vol. 39, No. 2, May 1984, pp.16-19.

HU, HSEN-HSU, "New Species and Varieties of Camellias and Theopsis of China", *Acta Phytotaxonomica Sinica,* Vol. 2, No. 2, April 1965, pp.139-140.

KIRINO, S., *My Green,* 1983. You will notice a difference in colour of the two varieties of *C. chrysantha* on pages 6 and 7.

NUCCIO, JULIUS and WILLIAM DONNAN, "The Crazy *C. chrysantha* Confusion", American Camellia Society, *The Camellia Journal* Vol. 40, No. 2, May 1985.
SEALY, J. ROBERT, *A Revision Of The Genus Camellia,* 1958, pp.39-42.
TUYAMA, TAKASI. "The Yellow Camellia Story - An Yunnan Report of Camellias", American Camellia Society, *American Camellia Yearbook - 1980,* pp.30-37.
XIA, LA-FANG, "Seeding-Breeding of *Camellia chrysantha*", American Camellia Society, *American Camellia Yearbook - 1984,* pp.42-48.
VARIOUS unpublished correspondence between ACS headquarters and cooperators throughout the United States, Australia, People's Republic of China, South Africa, Japan, England and Italy.

Raising fertilities of double flowering camellias by high temperature treatment in time of flower-bud differentiation

Les hautes températures font doubler les fleurs

Flores dobles mediante alta temperatura

Raddoppio dei fioro mediante alta temperatura

PROF. KAORU HAGIYA
Faculty of Agriculture, Niigata University

Camellia cultivars of double flower forms are generally regarded as ones with a tendency of non-fructification and the main reason for this would be monstrosity of the female organ in process of forming double flowers, especially by abortion of embryosac. On the other hand, it is reported that high temperature treatment induces single flower forms, and low temperature leads to double forms if a different temperature is given during the time of flower bud differentiation. Combining these two facts, it can be assumed that such non-fructification of double flower cultivars would be improved if cultivated in high temperature at the time of flower-bud differentiation. On this assumption, the following test was conducted:

Selected materials were 'Shishi-Gashire', one of the *Camellia hiemalis,* which were seven years old, potted trees, and regarded as non-fructification in case of a double flower form. Eight trees were selected for each temperature condition. During the period from 25th June to 25th July, natural temperature varied as shown in Figure 1 and this period was regarded as the time of flower-bud differentiation. Eight trees were put in this condition. During the same period, two additional plots of eight trees were placed in two air-conditioning phytotron, one maintaining temperatures from 28°C at night to 33°C in daytime, and the other with 17°C at night, 22°C in daytime respectively. Except for this period, all the three plots were placed in

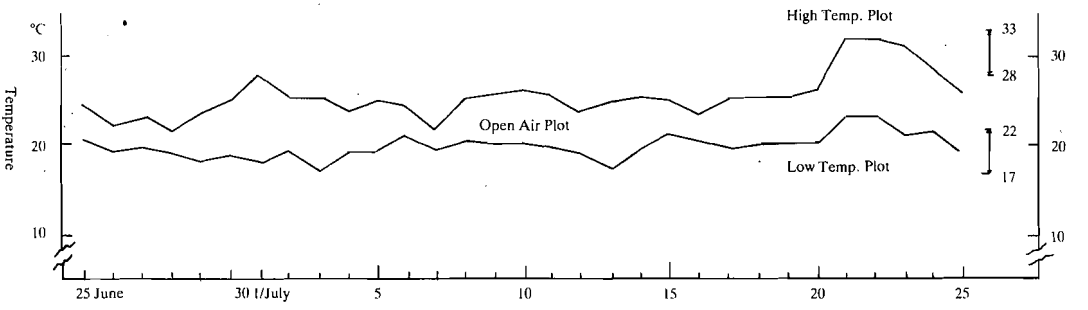


Fig. 1 Daily Highs and Lows of Temperature in the time of Flower-Bud Differentiation

the open air, but after the middle of November, all of them were moved to separate greenhouses which were kept over 5°C, for observation of their flowering and crossing. However, no significant difference was observed in their flowering time. Pollen used for crossing was fresh from 'Tachi-kan-Tsubaki' *(C. hiemalis)* and *C. granthamiana*, which have the same flowering time as the seed parents, but others were freeze-dried ones collected when they opened their flowers.

Table 1 shows the results of flower form and characteristics of the three plots. As you will note from this table, the lower the temperature is the time of flower-bud differentiation, the larger the flowers become and the greater the number of petals, but the stamens become fewer and the number of the petaloids increase instead.

Placed in higher temperature, the germinating rate of the pollen becomes greater. In case of lower temperature, germinating power of the pollen deteriorated along with increase of the petaloids. On the other hand the pistils in higher temperature are normal in terms of style and stigma as well, but most of those placed in lower temperature and open air show such monstrosity as shortening, thickening, fascination, etc.

Table 2 shows the results of interspecific

Table 1 Effects of Temperature in the Time of Flower-Bud Differentiation on Flower Forms and Sexual Organs of 'Shishi-Gashira' *(C. hiemalis)*

Plot	Number of Petal	Number of Petaloid	Diameter of Flowers	Number of Stamen	Germinating Rate of Pollen	Pistil			
						Monstrosity	Imperfect	Normal	Normal Rate
High Temp	18.5	1.1	6.8 cm	25.9	57.4%	1	2	27	90.0%
Low Temp	23.8	8.4	7.5 cm	3.4	16.4%	28	2	0	0 %
Open Air	20.5	5.2	7.2 cm	9.3	56.3%	21	8	1	3.3%

Table 2 Effects of Temperature in the Time of Flower-Bud Differentiation on Cross Compatibility of 'Shishi-Gashira' *(C. hiemalis)*

Plot	Cultivar of Pollen Parent	Chromosome Number (2n)	Number of Flowers Crossed	Seed capsules produced		Seeds produced		Number of Hybrid Seedling
				Number of Capsules	Percent per Pollination	Number of Seed	Percent per Pollination	
High Temperature	*C. japonica* (Hagoromo)	30	30	0	0 %	0	0 %	0
	C. reticulata (Crimson Robe)	90	28	4	14.3%	4	14.3%	3
	C. fraterna	90	29	10	34.5%	13	44.8%	11
	C. lutchuensis	30	28	1	3.6%	1	3.6%	1
	C. sinensis (Yabu-kita)	30	32	2	6.3%	3	9.4%	2
	C. granthamiana	60	28	3	10.7%	3	10.7%	2
	C. hiemalis (Tachi-Kan-Tsubaki)	90	27	18	66.7%	31	114.8%	30
Low Temperature	*C. japonica* (Hagoromo)	30	28	0	0 %	0	0 %	0
	C. reticulata (Crimson Robe)	90	34	0	0 %	0	0 %	0
	C. fraterna	90	29	0	0 %	0	0 %	0
	C. lutchuensis	30	32	0	0 %	0	0 %	0
	C. sinensis (Yabu-Kita)	30	33	0	0 %	0	0 %	0
	C. granthamiana	60	28	0	0 %	0	0 %	0
	C. hiemalis (Tachi-Kan-Tsubaki)	90	30	0	0 %	0	0 %	0
Open Air	*C. japonica* (Hagoromo)	30	31	0	0 %	0	0 %	0
	C. reticulata (Crimson Robe)	90	34	0	0 %	0	0 %	0
	C. fraterna	90	31	0	0 %	0	0 %	0
	C. lutchuensis	30	29	0	0 %	0	0 %	0
	C. sinensis (Yabu-Kita)	30	33	0	0 %	0	0 %	0
	C. granthamiana	60	32	0	0 %	0	0 %	0
	C. hiemalis (Tachi-Kan-Tsubaki)	90	28	1	3.6%	2	7.1%	2

crossing, using about 30 flowers of each tree from respective plots. Analysing this Table, the trees in open air and low temperature plots failed to yield seed capsules and seeds because of monstrosity and imperfect pistils except one capsule produced by intraspecific cross using pollen of 'Tachi-Kan-Tsubaki' in open air plot. However the trees in the high temperature plot where the pistils grew normally, brought such success as 66% of capsule-yielding rate and 115% of seed-yielding rate in case of using pollen of 'Tachi-Kan-Tsubaki' and in case of interspecific cross yield some hybrid seeds except pollen of *Camellia japonica*.

It is revealed from this experiment that even if such cultivars as 'Shishi-Gashira' which has a double flower form and scarcely yields seeds can be used as seed parent by cross breeding after high temperature treatment for normalising formation of the female organ.

Villa Borrini
S. Andrea di Compito, Lucca

La Villa Borrini

Villa Borrini

Villa Borrini

Marcella de Meo
Florence, Italy

The present shape of the Camellia garden surrounding the Villa Borrini (built in 1698) dates back to the beginning of the 19th century. In fact the garden was created during that period by Angelo Borrini, a physician who was an intimate friend to Carlo Lodovico di Borbone, Duke of Lucca. Sr. Borrini combined in his personality a great passion for Camellias together with a scientific mind that always guided him in his researches in the field of growing Camellias.

In his garden he collected a large number of Camellia cultivars and at the same time he created new varieties, selecting the plants he obtained from his seedlings. The love and the great interest he had in obtaining new Camellia varieties for his garden are testified by some letters, which are still in the hands of the family, which were written to him on the subject by the famous Florentine Camellia grower, Sr. E. Santarelli.

We know that the first Camellia plants were imported to Europe from China around the end of the 18th century and, as Sr. Borrini's correspondence about Camellias took place at the beginning of the 19th century, we presume he was almost a "pioneer" in this field.

He was bound to Sr. Santarelli by a similar deep interest in Camellias, and they exchanged new varieties as well as their projects, their experiences and the results of their researches. Thanks to these exchanges we still have, in the garden, old Italian Camellia varieties such as 'Aspasi' (Italy); 'Principessa Rospigliosi'; 'Parvula' and 'Stella Polare' (North Star).

Sr. Borrini also tried fabulous experiments, such as research for a fragrant Camellia. Sometimes his work gave important results; he created two new varieties of Camellias which he dedicated to his children (born in 1835 and in 1839 respectively), the 'Oscar Borrini' Camellia and the 'Ida Borrini' Camellia. The former has a very large flower, full, white with pink-red streaking, while the latter has a full flower, not very large, cherry-red with white-rimmed petals.

Both these varieties, whose original plants are still living in the Borrini garden, are recorded in the registers of the time and now-a-days they are included in the International Camellia Register.

In 1848 Angelo Borrini dedicated a wonderful violaceous Camellia to the Marchesa Theresa d'Ambra; the original water-colour painting of this Camellia is still in existence and can be seen in the Villa Borrini library.

Together with the 'Oscar Borrini' Camellia and the other above mentioned varieties there are now-a-days in the garden many other varieties; some the results of Sr. Borrini's work, others which have grown spontaneously in the course of the years. This dual work - of man and time - makes the Borrini garden a place of

great interest, both aesthetically and scientifically. In fact there are about 80 secular Camellia plants of 48 different Camellia varieties in the garden. An historical research concerning some varieties is now being carried out in order to establish their exact classification.

Following is an extract from The International Camellia Register concerning the three Borrini raised cultivars:

'Ida Borrini'...Published by Leguay in the "Revu Horticole", Jan. 1983, p.30.

'Oscar Borrini'...Scarlatti, 1888 catalogue.

'Theresa, Marchesa d'Ambra'...Vershaffelt, 1849 "Iconographie', 2(7) plate 3.

Many orthographic variations of the name have been published including: "Teresa, Marchesa d'Ambra"; "Contessa Teresa d'Ambra"; "Marchesa Teresa d'Ambra"; "Marchese Theresa d'Ambra"; "Teresa d'Ambra"; "Marchesa d'Ambra"; "Thereza Marchesa d'Ambra".

Camellia flower fragrance update

Le parfum des camélias — quoi de nouveau?

Fragancia actualizada de la flor de la camelia

Aggiornamento sulla fragranza del fiore di camelia

KEN HALLSTONE

Lafayette, California, U.S.A. Member of Northern California Research Committee

I distinctly remember joining the I.C.S. because I bought my first membership card from none other than the president of the Society, Professor E. G. Waterhouse at his home, Eryldene. He greeted us from his front porch holding a new seedling he was anxious to show us and talk about. The year was 1974, but when I recently looked at the cover picture on the number 6 issue of the Journal, I could see the same porch and exactly how he looked when he greeted us. We had just acquired the late Dr. Robert K. Cutter's collection of fragrant camellias, and Kay and I were on holiday 'down under' looking for new fragrant material. The account of that delightful trip can be found in that same 1974 issue. In 1980 in my article 'Slowly But Surely' I related the progress we had made in developing and promoting fragrance. I am pleased to have this opportunity to bring you up to date with the development of camellia flower fragrance here in Northern California.

After eleven years, and several thousand crosses later, I wish I could report to you that we now have that perfect show winning flower with the most delightful fragrance that everyone loves. This is turning out to be an impossible task. People cannot agree on what a show winning flower is and it is even worse when it comes to fragrance because what is pleasing to one may only be tolerated by another. However, in spite of these problems we have been making progress. When I say we, I mean the Show Committees and the hybridisers here in Northern California and other areas. This progress has been augmented by providing the opportunity for the general public and the camellia growers to see and smell the new flowers.

On February 15, 1975 the Santa Clara County Show, held in San Jose provided the first competition for fragrant flowers. Ten years later seven of our nine Northern California shows are promoting fragrance. The number of entries in the fragrant class has more than doubled. In addition, the early-winning named varieties such as 'Kramer's Supreme', 'Fragrant Frill' and 'Scentsation' are losing out to the newer hybrid seedlings which have been developed. One of the reasons for this trend may be the fact that *hybrid* seedling fragrance can usually be detected at about ten degrees lower temperature. And finally the hybridiser, who started out with small flowers like *C. lutchuensis* has increased the size of his seedlings by crossing them with *C. reticulata* - namely 'Buddha' and 'Crimson Robe'. Dave Feathers has two fragrant *reticulata* flowers, 'Harry M. Bloom' and one he calls 'Darling'. His backcrosses to the best of the fragrant hybrids should improve the fragrance in these excellent large *reticulata* flowers and bring them closer to our objective.

One of my 'Crimson Robe' seedlings, #634, crossed onto a fragrant hybrid seedling D4(2) has been a consistent winner of the fragrant section in our Northern California shows over the past two years. We feel seedling L19(1) has

earned a name. Because of its burst of golden stamens with an occasional pink streak on this 13 centimetre white *reticulata* flower we have named it 'Scented Sun'.

Although two of the seven shows are for fragrant seedlings only, it is interesting to note not a single named variety was a winner in the 1985 shows. Below is a list of the show winners.

Northern California 1985 Show Winners
(Fragrance Division)
Feb. 16 Santa Clara County Camellia Show, held in San Jose, CA
Winner: Cutter hybrid seedling E40, shown by Ken & Kay Hallstone, Lafayette, CA.
March 2 Northern California Camellia Society Show, held in Concord, CA
Winner: Hybrid seedling L19(1) grown and shown by Ken & Kay Hallstone, Lafayette, CA
March 9 Sacramento Camellia Society Show, held in Sacramento
Winner: Cutter hybrid seedling D3(4) shown by Maurice and Jocelyn Vervalle, Sacramento, CA
March 9 Central California Camellia Society Show, held in Fresno, CA
Winner: Unnamed hybrid seedling grown and shown by Wilbur and Mary Ann Ray, Fresno, CA
March 16 Modesto Camellia Society Show, held in Modesto, CA
Winner: Unnamed Parks hybrid seedling, shown by Dave Feathers, Lafayette, CA
March 25 Sonoma County Camellia Society Show, held in Santa Rosa, CA
Winner: Hybrid seedling L19(1) shown and grown by Ken & Kay Hallstone, Lafayette, CA
March 30 Queen of the Valley Camellia Show, held at Atwater, CA
Winner: Hybrid seedling M26(2) shown and grown by Ken & Kay Hallstone, Lafayette, CA

The Second Oporto Camellia Show and Contest Portugal 1985

La seconde exposition de camélias d'Oporto

Segunda Exposición de la Camelia en Oporto

La seconda mostra della camelia di Oporto

VALDEMAR CORDEIRO
Garden Department of the Oporto City Hall

*see inside front cover & colour section

It is thought that the Camellia was introduced into Europe by the Portuguese long before the time of Missionary Jorge José Camelli after whom the Camellia was named by Linnaeus.

It is quite possible that, right at the beginning of the 16th century, the Camellia, a relative of the tea plant and of the scented gardenia, was brought by the intrepid Portuguese navigators to the continent of Europe.

So in these circumstances it is not surprising that the Camellia reached such an important role in the Portuguese landscape during the 18th and 19th centuries both in the large parks and gardens of the North of Portugal. However the original introductions lost much of their interest and reputation, especially during the 20th century, due to the improvement and hybridization that produced the famous 'Saudada Martins Branco' the delicate brilliance of 'D. Pedro V', the immaculate 'Dr. Baltasar de Melo' and so many other productions of the Portuguese Horticulturalists.

Two other factors contributed to the recession of the Camellias' popularity and its use in the landscape and gardens. These were its slow growth and its high price even when young plants were concerned.

The Oporto Town Hall has been trying to stimulate the taste for the Camellia which, without having claims of an emblematic or heraldic flower as it is in Japan, has a great and dear tradition in Portuguese gardens as already referred to.

In 1984 the first Camellia Show was successfully accomplished and, in 1985 the Oporto City Hall organised the second Camellia Show and Contest that took place in Oporto from the 28th to the 31st of March. This was specially chosen to coincide with the visit of Her Majesty Queen Elizabeth II of England. How-

ever the remarkably full schedule of Her Majesty prevented us from the honour of the anticipated visit to the Camellia Show. The 1985 poster of the Camellia Show* is an example of the appreciation of the Portuguese Camellia lovers towards Her Majesty.

The Second Camellia Show was a complete success and the numbers involved speak for themselves. There were 25 exhibitors and the number of visitors to the show exceeded 5,000, which was extremely rewarding since we are living in dreary times full of indifference towards everything that is not material. This was exactly the aim of the Camellia Exhibition; to remind the Portuguese and the Oporto inhabitants in particular of all the beauty and worth of Camellias — in the simplicity of some; in the large form of so many others; in the fascinating colour of all and in the novelty of many.

In this exhibition prizes were awarded within two distinct groups:

1. Artistic whole (combination of Camellias with decorative elements)
   1st prize — Rosana Ivone (Porto)
   2nd prize — Maria Elisa Pimenta (Famalicão)
   3rd prize — Fernando Vieira Coelho (Porto)

2. Classification of the individual flowers
   Red flower — Francisco F. Rocha (Paredes)
   White flower — Maria Dulce Fonseca (Braga)
   Pink flower — Lino Nogueira (Porto)
   Striped flower — Alfredo Moreira da Silva (Porto)
   Reticulata — Maria Augusta Fontes (Braga)
   Hybrids — Clara Gil de Seabra (Porto)

This Second Camellia Exhibition was honoured by the support of the I.C.S. The Asian region sent us a magnificent collection of 100 stamps representing the species *Camellia japonica*. We were also delighted with the initiative of the British members of the I.C.S. in offering a prize of Twenty-five pounds. Unfortunately it was not possible to award this prize at this show as there was nothing within the rules of the show to permit it. This will certainly be corrected next year when the prize will be awarded on behalf of the I.C.S. We would like to report that we are very grateful to

Mrs. Violet Lort-Phillips for her kind letter and we are proud of her remark when she considered the city of Oporto to be the "Camellia City".

Our modest Camellia Exhibition also enjoyed the kind greetings and good wishes of encouragement and esteem sent to us from Mr. Eric Craig in distant Australia.

We had the privilege of having our exhibition opened by the Executive President of the Oporto Town Hall who delivered a complimentary speech on behalf of the effective President of the Oporto Town Hall, Engenherio Paulo Valada, a great supporter of the exhibition.

We think we have obtained our goals — reminding the public of the somewhat forgotten Camellia beauty, collecting together some of the considerable number of Camellia amateurs and finally strengthening our wish of repeating similiar initiatives where we will keep on trying to create a healthy and greater competition among the Portuguese participants and to promote expansion by welcoming foreign participation.

Camellias in the world

Les camélias dans le monde

Las camelias del mundo

Le camelie nel mondo

TAKAYUKI TANAKA

Horticultural Laboratory of Vegetable and Ornamental Crops Department of Agriculture, Kyushu Tokai University, Choyo-mura, Aso-gun, Kunamoto, 869-14, Japan

Introduction

The distribution of the genus *Camellia* is restricted to southeast Asia and extends to Indonesia in the south, to Nepal in the west and to Korea and Japan in the north and northeast (see Fig. 1); however, the genus has its greatest species diversity in the southern part of China. Sealy (1958) divided the 82 species of the genus *Camellia* into 12 sections, but recently Chang (1981) has proposed a classification with a much larger number of species (196) which he divides into 19 sections.

The most famous species in this genus are *Camellia japonica* L., and *C. sinensis* (L.) O. Ktze. Tea, *C. sinensis,* is used throughout the world as a beverage and camellia is widely cultivated in mild temperature areas as an ornamental woody shrub. Tea was originally classified in a different genus *Thea (Thea sinensis* L.) by Linnaeus (1738) but the two Linnaean genera are generally united now to form the genus *Camellia.* In addition, the genus *Camellia* also includes other species which are sources of oil and charcoal. Not only *C. oleifera,* and *C. sasanqua*, but also *C. japonica* and other *Camellia* species, have been cultivated commercially for seed oil in China and Japan since ancient times.

Camellias as ornamental plants

In this paper, the author will restrict his remarks to the use of *Camellia* as an ornamental plant.

Camellia japonica grows wild in Japan and its cultivated varieties were developed extensively during the Edo-period (1603-1868). More recently, they have spread all over the world as garden plants. *Camellia reticulata* and *C. sasanqua* also were introduced into European countries about 1820 and then spread to other continents. Now these *Camellia* species are in vogue in the United States of America, Australia, New Zealand and some European countries as somewhat cold hardy evergreen shrubs.

In this century especially, other *Camellia* species have been also introduced into the countries where *Camellia* is a popular ornamental. The *Camellia* × *williamsii* cultivars are a group of hardy free-flowering shrubs developed by the late Mr. J. C. Williams and result from hybrids between *C. japonica* and *C. saluenensis.* As this combination was so succesful, hybridization became popular among *Camellia* researchers in western countries. Especially in the United States, many interspecific hybrids have been developed and introduced into cultivation including hybrids between: *C. japonica* × *C. fraterna, C. japonica* × *C. reticulata, C. pitardii* × *C. japonica, C. saluenensis* × *C. cuspidata, C. rosaeflora* × *C. tsaii, C. saluenensis* × *C. gran-*

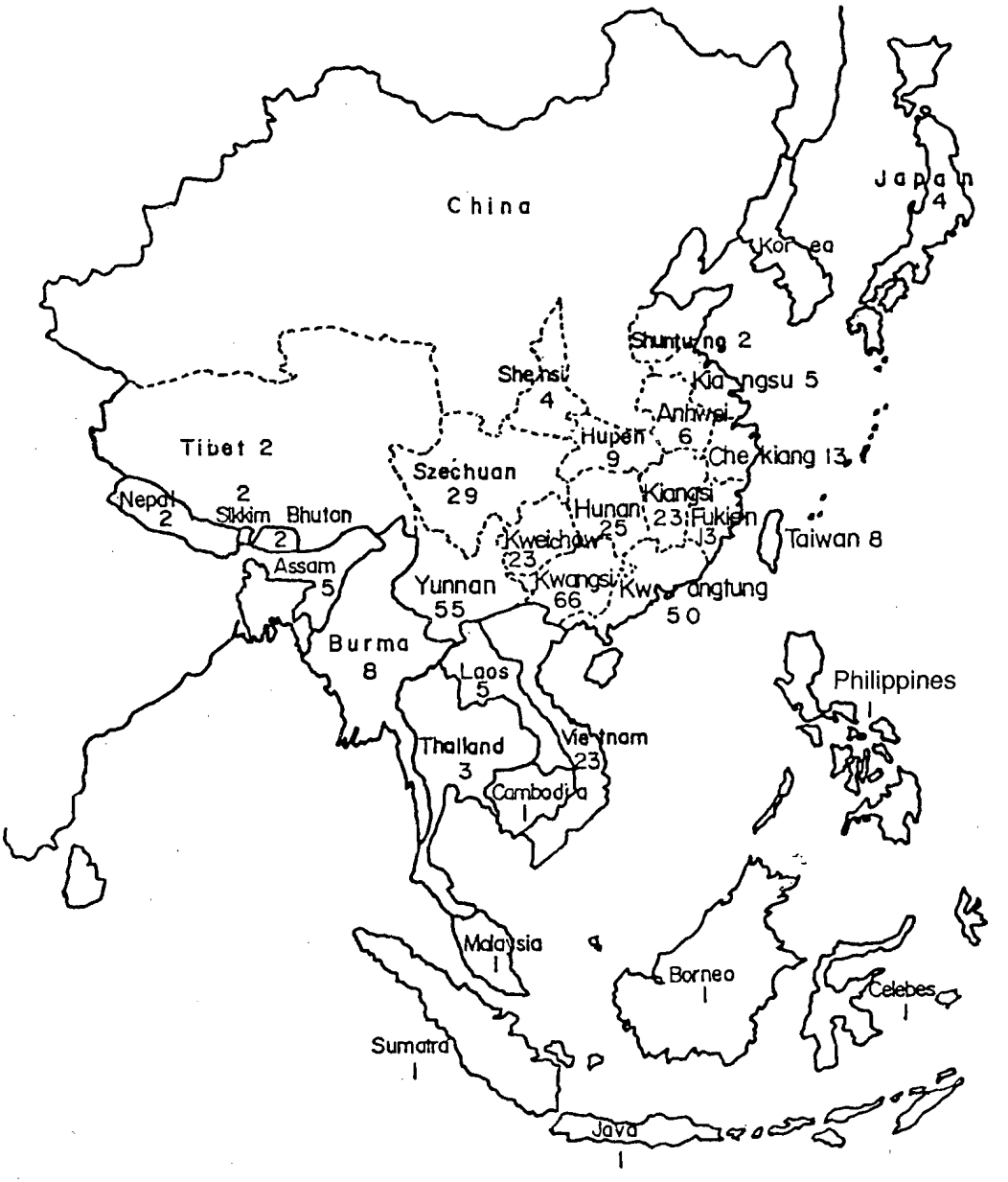


Figure 1 Area of distribution of *Camellia* with numbers of species in each geographical region

thamiana, C. cuspidata × *C. fraterna, C. japonica* × *C. irrawadiensis, C. pitardii* × *C. reticulata,* and so on.

It is a reasonable certainty that interspecific hybridization, using new species recently introduced into cultivation will produce more interesting combinations in the near future.

Dr. W. L. Ackerman, at the National Arboretum in Washington D.C., was successful in introducing the gene for fragrance from *C. lutchuensis* into the hybrid between *C. japonica* and *C. lutchuensis*. *Camellia lutchuensis*, native to the Liu-kiu Islands of Japan, has excellent fragrance, but its small white flowers are considered too small for garden purposes. Parks *et al* (1981) and the authors (1980) suggested that the red pigmentation of *C. sasanqua* was originated from *C. japonica*

via *C. vernalis*.

Furthermore, a yellow *Camellia* was discovered in China in 1975, and named *C. chrysantha*. This species has deep yellow flower colour but the blooms are small and single and the leaves on the shrub are too large (Tuyama 1975). In order to introduce this species into cultivation in Japan, many people visited China, and they not only introduced *C. chrysantha* but also many other new species after 1979. It is hoped that yellow-flowered cultivars will be developed in the future using *C. chrysantha*.

Methods

Last October, the author sent a questionnaire to twenty-two members of the International Camellia Society, and received answers from twenty of them representing nine nationalities. The questionnaire was designed to identify the manner in which *Camellia* species have spread over the world. The questionnaire contained questions about species diversity in cultivation, and names of people who carried out the introduction.

Results of the questionnaire and discussion

Camellia species cultivated outside of the country of origin are enumerated in Table 1. The listing follows the taxonomic treatment of Chang (1981). Forty-nine species in 12 sections have been introduced into other countries including *C. maliflora, C. hiemalis, C. uraku (C. wabisuke)* and *C. vernalis*, which are not known in the wild condition and are thought to have originated in cultivation. As was mentioned by some of the correspondents, the introductions they list are from their personal records, so the year when the species was first introduced into their country may be earlier than the date they record. Many species have been repeatedly introduced and lost.

According to Chang's classification, some species or varieties were formerly thought to be merely synonyms, and synonyms are indicated here in parenthesis.

The number of species, subspecies, varieties and synonyms of *Camellia* in nine countries is listed in Table 2. 49 species of *Camellia* are cultivated outside of the country of origin. Among these 9 countries the largest number of exotic cultivated species are in Japan; this may be because Japan is situated near China, or because the author could get more precise data concerning *Camellia* cultivation there than from other countries.

The first country in which each species was first cultivated as an exotic and the year of introduction is listed in Table 3. Some species are considered by Chang to be synonyms (Table 1), but they are retained as species here since the taxonomic status of these species is uncertain. Japan is excluded for the taxa originating in Japan. *Camellia sinensis, C. reticulata* and *C. oleifera* were introduced into Japan in ancient time, but they were not exported to other countries from Japan until more recently. Before 1924, *Camellia* species were distributed by the English primarily. *Camellia japonica* was introduced into England from China in 1739 and the English exported it to Italy in 1780, US in 1800, France in 1808, New Zealand in 1820, Australia in 1831 and South Africa in 1840 (Table 1 and 3). Because Japan was closed by an isolationist policy from 1635 to 1858, the early distribution of *Camellia japonica* was done entirely by the English.

The first surge of interest in *Camellia* cultivation came with the introduction of *C. japonica, C. reticulata* and *C. saluenensis* into the West via England. The second surge of interest came from America and involved the breeding of interspecific hybrids. The third and very recent surge of interest was started by the discovery of yellow *Camellia (C. chrysantha)*; some Japanese *Camellia* parties visited China to introduce *C. chrysantha* and they brought it and a lot of other new species of *Camellia* back to Japan in 1979 and 1980.

The list of *Camellia* species introduced into nine major *Camellia* growing countries is shown in Table 4. When *Camellia japonica* was first introduced into England and Italy in the eighteenth century, it was treated as an exotic indoor plant at first. The frequency of international circulation of *Camellia* species at certain periods is shown by the total number in Table 4. More species of *Camellia* were accumulated in the western countries in the first half of the nineteenth century than the latter half. As was pointed out above, after 1950 the United States took a leading role in the international circulation of *Camellia* species. As grafting methods became more popular in recent years, species often spread to a second country a few years after an initial introduction into cultivation.

The same is true of the introduction of *C. chrysantha* after the description of it by Tuyama (1975), and the publication of "A taxonomy of the genus *Camellia*" by Chang (1981). The interest in yellow camellias was so great that *C. chrysantha* was available in seven countries only 3 years after its first introduc-

tion from China.

The yellow varieties of various flower forms and size are desired to be bred up by the introgressive hybridization of yellow pigmentation of *Camellia chrysantha* into *C. japonica.*

Conclusion

The wild species of *Camellia* are important both for plant breeding and taxonomic studies on the origin of the species and the genus. The *Camellia* breeder is constantly searching for germplasm that will make it possible to breed new flower colours such as yellow and blue or develop cold hardiness and fragrance. Although the author has primarily discussed *Camellia* species in Japan and in Western countries, people in other far Eastern countries must undertake the cultivation and study of the species of the genus *Camellia.*

Literature Cited

1. Ackerman, W.L. 1973. Species compatibility relationships within the genus *Camellia.* J. Hered. 64 : 356-358.
2. Chang, H. T. 1981. A taxonomy of the genus *Camellia.* Journal of Sun Yatsen University : 1-180.
3. Hagiya, K. 1982. Interspecific hybridization of *Camellia* using *C. chrysantha* pollen (Preliminary report) Tubaki 21 : 1-6.
4. Hilsman, P. L. 1966. Interspecific *Camellia* hybrids. Amer. Camellia Yearb. 1966 : 113-142.
5. Parks, C. R. 1982. Sasanka and its hybrids. International *Camellia* Journal : 29-33.
6. Parks, C. R.,K. Kondo and T. Swain. 1981. Phytochemical evidence for the genetic contamination of *C. sasanqua.* Japan. J. Breed. 31 : 168-182.
7. Sealy, J. R. 1958. A revision of the genus *Camellia.* Roy. Hort. Soc., London : pp 239.
8. Tuyama, T. 1975. On *theopsis chrysantha* Hu. Journ. Jap. Bot. 50 (10) : 9-11.
9. Uemoto, S., T. Tanaka and K. Fujieda. 1980. Cytogenetic studies on the origin of *C. vernalis.* I. on the meiotic chromosomes in some related *Camellia* forms in Hirado Island. J. Japan. Soc. Hort. Sci. 48 : 475-482.

Table 1 List of countries in which *Camellia* species are cultivated including the year of introduction

		USA	Aus	NZ	UK	SAf	It	Fra	Por	Swi	Jap
	Archecamellia										
1	*C. granthamiana*	1958 Hong	1955 Hong	1960 Hong	? Hong	1976 USA	1965 USA	1961 Hong	O	O	? Hong
	Stereocarpus										
2	*C. yunnanensis*	1980 Chin	1979 Chin	1982 USA	—	1983 Aus	—	—	—	—	1981 Chin
	Oleifera										
3	*C. sasanqua*	1935 Jap	1873 Jap	1900 ?	1896 Jap	1976 USA	1822 ?	1960 USA	O	O	Orig
4	*C. vietnamensis*	1981 Chin	—	—	—	—	—	—	—	—	1979 Chin
5	*C. oleifera*	1948 Chin	1895 Jap	O	1820 Chin	1976 USA	1835 ?	O	—	—	Long ago
	(C. drupifera)	1967 Chin	—	1958 ?	? Hong	—	—	—	—	—	1970 ?
	Furfuracea										
6	*C. crapnelliana*	1967 Hong	1960 Hong	—	—	1980 Hong	—	—	—	—	1968 Hong
	(C. gigantocarpa)	1981 Chin	—	—	—	1983 Jap	—	—	—	—	1979 Chin
	(C. octopetala)	1980 Chin	—	—	—	—	—	—	—	—	—
7	*C. furfuracea*	1977 Jap	—	—	—	—	—	—	—	—	1967 Taiw
	Paracamellia										
8	*c. grijsii*	1980 Chin	—	1983 USA	—	—	—	—	—	—	1980 Chin
	(C. yuhsienensis)	1980 Chin	—	1982 USA	—	—	—	—	—	—	1979 Chin
9	*C. confusa*	—	1972 Viet	—	—	—	—	—	—	—	? Thai
10	*C. kissii*	1958 Nepa	1962 USA	1960 ?	1820	?	1840	—	—	USA	1970
11	*C. brevistyla*	1981 Jap	—	—	—	—	—	—	—	—	1967 Taiw

		USA	Aus	NZ	UK	SAf	It	Fra	Por	Swi	Jap
	(C. tenuiflora)	1967 Taiw	1970 Jap	O	—	—	—	—	—	—	1967 Taiw
12	*C. maliflora*	1937 Chin	1835 UK	1956 UK?	1816 Chin	1976 USA	1870 ?	O	—	USA	1963
13	*C. miyagii*	1955 Jap	1962 USA	O	—	1976 USA	—	—	—	—	Orig
	Pseudocamellia										
14	*C. szechuanensis*	—	—	—	—	—	—	—	—	—	1982 Chin
	Camellia										
15	*C. polyodonta*	1983 Jap	—	—	—	—	—	—	—	—	1981 Chin
16	*C. semiserrata*	1979 Chin	—	—	—	—	—	—	—	—	1979 Chin
17	*C. reticulata*	1946 Chin	1873 UK	1927 UK	1820 Chin	1976 USA	1845 ?	1965 USA	O	O	1673 Chin
	(C. heterophylla)	—	1954 UK	—	—	—	—	—	—	—	—
18	*C. pitardii*	1965 Chin	1960 USA	1964 USA	O	—	—	—	—	—	—
	var. yunnanica	1980 Chin	1962 UK	1964 USA	O	—	—	—	—	—	1972 Aus
19	*C. hiemalis*	1928 Jap	1949 Jap	1950 ?	—	1976 USA	1960 UK	O	—	—	Orig
20	*C. uraku*										
	(C. wabisuke)	1938 Jap	1938 Jap	1935 ?	O	1976 Jap	1965 Jap	—	—	—	Orig
21	*C. hongkongensis*	1955 Hong	1954 Hong	1957 USA	1874 Hong	1976 USA	—	1962 USA	O	—	1958 Hong
22	*C. saluenensis*	1952 Chin	1938 UK	1946 Aus	1924 Chin	1976 UK	1950 ?	1962 Belg	O	O	1961 USA
23	*C. chekiangoleosa*	1981 Chin	1983 Hol	—	1957 ?	—	—	—	—	—	1979 Chin
24	*C. japonica*	1800 Jap	1831 UK	1820 ?	1739 Chin	1840 UK	1780 UK	1808 ?	O	—	Orig
	(var. hozanensis)	1970 Jap	—	—	—	—	—	—	—	—	1967 Taiw
	subsp. rusticana	1944 Jap	1950 Jap	1965 Jap	1954 Jap	1976 Jap	1960 UK	1974 UK	—	—	Orig
	var. macrocarpa	1980 Jap	1978 Jap	1978 USA	—	—	—	—	—	—	Orig
	Chrysantha										
25	*C. chrysantha*	1980 Chin	1981 Chin	1979 Chin	1981 Chin	—	1983 Jap	1980 Jap	—	—	1979 Chin
	(var. microcarpa	1981 Jap	—	—	—	—	—	—	—	—	1979 Chin
26	*C. euphlebia*										
	(C. chrysantha var. macrophylla)	1983 Jap	—	—	—	—	—	—	—	—	1980 Chin
	Calpandria										
27	*C. lanceolata*	—	—	—	—	—	—	—	—	—	1980 Phil

		USA	Aus	NZ	UK	SAf	It	Fra	Por	Swi	Jap
	Thea										
28	*C. taliensis*	1965 Chin	1962 USA	O	1914 Chin	—	—	O	O	—	1969 Aus
29	*C. irrawadiensis*	1956 Burm	1960 USA	O	—	—	—	—	—	—	1970 USA
30	*C. sinensis*	1953 Jap	1835 UK	1925 ?	1768 Chin	O	1829 ?	1910 ?	O	O	1191 Chin
	Theopsis										
31	*C. cuspidata*	1967 Chin	1950 UK	1960 ?	1900 Chin	1976 UK	1930 UK	1962 Belg	O	—	O
32	*C. forrestii*	1980 Chin	1979 Chin	1982 USA	—	—	—	—	—	—	1980 Chin
	var. acutisepala	—	1960 USA	—	—	—	—	—	—	—	—
33	*c. tsaii*	1961 UK	1955 USA	1965 USA	1917 Chin	1976 USA	1960 ?	O	O	—	1972 Aus
34	*C. transnokoensis*	1966 Taiw	1970 Jap	1974 USA	—	1983 Aus	—	—	—	—	1967 Taiw
35	*C. lutchuensis*	1955 Jap	1960 Hong	1960 ?	1981 USA	1976 USA	1970 ?	1976 USA	—	—	Orig
36	*C. euryoides*	—	—	—	1822 Chin	—	—	—	—	—	—
37	*C. trichoclada**	1977 Jap	—	—	—	—	—	—	—	—	1967 Taiw
38	*C. longicarpa*	—	—	—	—	—	—	—	—	—	1982 Chin
39	*C. transarisanensis*	1971 Taiw	1965 USA	—	—	—	—	—	—	—	1967 Taiw
40	*C. fraterna*	1948 Chin	1949 Hong	1955 UK?	1955 USA	1976 USA?	1955 USA	O	—	—	1960 USA
41	*C. dubia*	—	—	—	—	1979 USA	—	—	—	—	—
42	*C. rosaeflora*	1958 Chin	1951 It	1958 USA	1824 Chin	1976 USA	—	O	—	—	1960 USA
43	*C. nokoensis*	1968 Taiw	1980 USA	—	—	—	—	—	—	—	1967 Taiw
44	*C. tsofuii*	—	—	—	—	—	—	—	—	—	1982 Chin
	Camelliopsis										
45	*C. caudata*	1968 Hong	1965 Hong	O	—	—	—	—	—	—	1978 Assa
46	*C. assimilis*	1961 Hong	1960 USA	1960 ?	—	—	—	—	—	—	1958 Hong
47	*C. salicifolia*	1965 UK	1954 Hong	1960 ?	1950 ?	1976 Taiw	—	—	—	—	1958 Hong
	(Paracamellia ?)										
48	*C. meiocarpa*	1981 Jap	—	—	—	—	—	—	—	—	1980 Chin

(Hybrid ? between *C. sasanqua* and *C. japonica*)

49	*C. vernalis*	1935 ?	1936 Jap	1950 ?	O	1976 USA	1950 UK	O	—	—	Orig

Aus: Australia; NZ: New Zealand; Por: Portugal; UK: England; SAf: South Africa; It: Italy; Fra: France; Swi: Switzerland; Jap: Japan; Hong: Hongkong; Chin: China; Nepa: Nepal; Viet: Vietnam; Taiw: Taiwan; Belg: Belgium; Burm: Burma; Hol: Holland; Phil: Philippine; Assa: Assam; Orig: Original.

Table 2 List of the number of Species etc. in the genus *Camellia* introduced into each of the ten countries investigated

	Total	USA	Aus	NZ	UK	SAf	It	Fra	Por	Swi	Jap
No. of Species	49	42	35	31	23	23	17	18	10	5	47
No. of Subspecies	1	1	1	1	1	1	1	1	0	0	1
No. of varieties	3	4	3	2	1	0	0	0	0	0	1
No. of Synonyms	8	5	1	2	1	1	0	0	0	0	6

See abbreviations in Table 1

Table 3 List of countries in which each Camellia species was first cultivated as an exotic and the year of introduction

Species	Year	Country	Species	Year	Country
C. japonica	1739	UK[y]	*C. transarisanensis*	?	USA
C. sinensis	1768	UK[y]	*C. caudata*	1965	Aus
C. maliflora	1816	UK	*C. transnokoensis*	1966	USA
C. kissi	1820	UK	*C. tenuiflora*	1967	USA
C. oleifera	1820	UK		1967	Jap
C. reticulata	1820	UK[y]	*C. nokoensis*	1967	Jap
C. sasanqua	1822	It[y]	*C. furfuracea*	1967	Jap
C. euryoides	1822	UK	*C. trichoclada*	1967	Jap
C. rosaeflora	1824	UK	*C. japonica*		Jap[z]
C. hongkongensis	1874	UK	*var. hozanensis*	1967	
C. cuspidata	1900	UK	*C. brevistyla*	1967	Jap
C. taliensis	1914	UK	*C. confusa*	1972	Aus
C. tsaii	1917	UK	*C. japonica*		
C. saluenensis	1924	UK	*var. macrocarpa*	?	USA[y]
C. hiemalis	1928	USA[y]	*C. dubia*	?	USA
C. vernalis	1935	USA[y]	*C. yunnanensis*	1979	Aus
C. wabisuke	1935	NZ[y]	*C. semiserrata*	1979	USA
(C. uraku)				1979	Jap
C. japonica	1944	USA[y]	*C. gigantocarpa*	1979	Jap
subsp. rusticana			*C. vietnamensis*	1979	Jap
C. fraterna	1948	USA	*C. forrestii*	1979	Aus
C. salicifolia	1950	UK	*C. yuhsienensis*	1979	Jap
C. heterophylla	?	UK	*C. chrysantha*	1979	NZ
C. lutchuensis	1955	USA		1979	Jap
C. miyagii	1955	USA	*var. microcarpa*	1979	Jap
C. granthamiana	1955	Aus	*var. macrophylla*	1980	Jap
C. irrawadiensis	1956	USA	*(C. euphlebia)*		
C. chekiangoleosa	1957	UK	*C. meiocarpa*	1980	Jap
C. drupifera	1958	NZ	*C. octopetalla*	1980	USA
C. assimilis	1958	Jap	*C. grijsii*	1980	USA
C. forrestii	?	USA	*C. lanceolata*	1980	Jap
var. acutisepala			*C. polyodonta*	1981	Jap
C. crapnelliana	1960	Aus	*C. tsofuii*	1982	Jap
C. pitardii	?	USA	*C. szechuanensis*	1982	Jap
var. yunnanica	?	UK	*C. longicarpa*	1982	Jap

y: excluding Japan
z: from Taiwan

Table 4 Number of *Camellia* species introduced newly for each country in certain period

Country	USA	AUs	NZ	UK	SAf	It	Fra	Por	Swi	Jap	Total
Original species	0	0	0	0	0	0	0	0	0	7	7(0)[z]
Before 1966	0	0	0	0	0	0	0	0	0	2	2(0)
1700-1799	0	0	0	2	0	1	0	0	0	0	3(2)
1800-1849	1	3	1	6	1	5	1	0	0	0	18(7)
1850-1899	0	3	0	2	0	1	0	0	0	0	6(1)
1900-1924	0	0	1	4	0	0	1	0	0	0	6(4)
1925-1949	8	5	4	0	0	1	0	0	0	0	18(4)
1950-1959	9	6	6	3	0	3	0	0	0	3	30(7)
1960-1969	11	11	8	0	0	4	6	0	0	12	52(10)
1970-1979	4	4	2	0	18	1	1	0	0	10	40(7)
After 1980	9	3	3	2	3	1	1	0	0	9	31(7)
Unknown	0	0	6	4	1	0	8	10	5	4	28(0)
Total	42	35	31	23	23	17	18	10	5	47	241 (49)

z: Number of *Camellia* species introduced newly for all countries in that period (see Table 3)

Acknowledgement

The author is greatly indebted to the following members who answered my questionnaire:
(Australia) Mr S. Clark, Mr A. W. Jessep and Mr T. J. Savige
(England) Mr H. J. Tooby
(France) Dr J. Crèzè and Mr P. Plantiveau
(Italy) Mr H. Piero and Dr A. Sevesi
(Japan) Mr N. Hakoda
(New Zealand) Col. T. Durrant, Mr N. Haydon, Mr D. J. Henderson and Mr T. Lennard
(Portugal) Mrs Mildred Blandy
(South Africa) Mr L. Riggall
(Switzerland) Sir P. Smithers
(U.S.A.) Dr. W. L. Ackerman, Dr. B. Bartholomew, Mr M. H. Brown, Mr J. Nuccio and Dr. C. R. Parks

The author would also like to thank Dr. H. T. Chang of Zhongshan University, Dr. T. Matsumara of Kyushu Tokai University, Dr. C. R. Parks of University of North Carolina and Dr. S. Uemoto of Kyushu University for their assistance in this study.

Camellias in Germany

Les camélias en Allemagne

Camelias en Alemania

Le camelie in Germania

*(See Colour Section)

A considerably increased interest in Camellias has been shown in Germany in recent years and this has resulted in the Society's Directors at Brighton agreeing to bring into being a German/Austrian Region of the Society. Dr Klaus Hackländer of Trier has been appointed the Society's Membership Representative for the area. It is hoped that this interest will continue to grow in the coming years as a result of the communications between the members of the new region and other members of the Society.

A recent issue of the German magazine "Mein schöner Garten" carried a number of pages on Camellias. We are grateful to that Journal for permitting us to set them out below. They clearly indicate the rising interest in the subject in that country and the difficulties under which the growers of Camellias labour.

Camellias too tender for our garden?

The honest answer can only be "yes and no". The camellia, in the immediate future, will hardly become as easy as, for example, the cultivation of the rhododendron has proved itself to be. An evergreen shrub of this kind needs, in this country, more special care. Like the rhododendron, the camellia does not like lime -neither in the ground nor the water, nor the manure. Cold on the other hand does not matter so much.

I had my own personal experience with camellias on my first Easter holiday on the Atlantic coast of Normandy. Of course, people like us, do not only look at the usual sights, but first of all glance over the garden fences. I actually discovered blooming camellia bushes in front of every house. As I too until then had looked upon the camellia as something especially delicate, you can imagine my surprise. There, close to the coast the camellia belongs to the normal picture of early spring, as does the yellow flowering Forsythia at home in South Baden.

When, two years later, I heard for the first time about the camellia grower Peter Fischer, from Wingst, I was not at all surprised that his place of residence was in the far north of Germany. I was fascinated to have found a gardener in Germany who occupied himself so intensively with camellias - above all with his own outdoor tests with reference to hardiness. Peter Fischer says "many *Camellia japonicas* are hardy here also, but do not form enough buds due to the summer being too short. Various hybrids whose hardiness to some extent is better are more certain to blossom. The older and more woody the plants are, the greater their hardiness. Through preventive measures, i.e. position, covering with fir brushwood, leaves or straw during snowless frost - keeping it airy however, the hardiness is much increased. Because of the covering, the quality of the blooms will certainly be enhanced."

In order to be able to convert Peter Fischer's statements into practical gardening, you must first know something about the natural habitat of the camellia. The home of *C. japonica*, for example, is in the mountains of Korea and Japan. Therefore it would be absolutely wrong to treat it as other exotic plants in our gardens.

Most certainly you will cater for the fastidious requirements of the camellia when you plant it in a peat border, as you do the rhododendron. This border must be sheltered from the wind, and lightly shaded, i.e. in order to break the wind, increase the air moisture, avoid the heat and temper the frost. So try as much as possible to offer the camellia in your garden the same cool and humid forest climate as it gets in its homeland.

Because of the existing unfavourable soil in most parts of Germany it will be absolutely necessary to prepare a special bed for planting the lime sensitive camellia.

Finally one must not forget, especially during the winter, that camellias are evergreen plants. Because they keep their foliage they lose moisture through the leaves during the

cold season as well. And when, above all in the snowless areas there is a lack of water, the plants could wither. Under wintercover of fir brushwood and leaves the soil will not only remain warmer, but also more moist. When in the spring the temperature rises during the day, you must again check the soil moisture.

If, up to now, you have had bad luck with your indoor camellias, have a go in the open. In winter you cover the pot all round with brushwood and leaves and build a frostproof roof of transparent plastic over the camellia. Then you can protect flowering plants from repeated night frosts. And also put your potted camellia in a sheltered half shaded position.

In the house you should always choose the coolest and lightest spot for the camellia. You must encourage such "imprisoned" specimens to blossom by particularly regular tending without changing their position. It is important only to water with soft water, gradually letting it dry from July onwards. And for manure from December till June choose only special limefree products - take it calmly if you are given a camellia and it turns sour and drops its buds. The Lady from Asia is really only difficult on this point - she does not like dry warm air.

EVA BIEGERT

What about the scent?

The best known camellia, *C. japonica* is not exactly well known for its scent. - Blame hybridisation. The future seems more rosy as American breeders in recent times have increasingly taken this factor into consideration when cross-breeding.

The camellia is in the home nearly everywhere

At least its end-product can be found in many households - as tea. The botanical name of the teaplant which produces the desired leaves is *Camellia sinensis*. All camellias belong to the teaplant family. Originally Europe imported its tea exclusively from China. A legend has it that Europe only came to know a different tea camellia because the Chinese cheated the East India Company. It wanted to cultivate tea on its Indian and American estates and through bribery got Chinese officials to take a teaplant out. Instead of the tea camellia, the Chinese are said to have handed over *Camellia japonica*. Perhaps not even with malicious intent. The Chinese did not and still do not differentiate between the decorative flowering camellia and the useful one. To them all camellias are teaplants. The teaplant *C. sinensis* with its white blooms is not the only useful plant of this family. The Japanese e.g. extract camellia oil from the seeds of various species, such as *C. sasanqua*. The production is not now of importance, but camellia oil was formerly used by the Japanese in the home as fuel and ointment. Since long hair, through influence from the West, has ceased to be fashionable with both sexes, the Tsubakki oil, extracted from the *C. japonica*, has now hardly any importance in hair cosmetics.

At Dr Hackländer's in Trier the camellias are blooming in the open

In Germany now, many camellias grow and thrive outside in the garden. Readers' letters confirm this all the time. Yet anyone who wished to be intensively occupied with this plant up to now has had one disappointment: There is little German literature on the subject and hardly any sources of supply.

Dr Klaus Hackländer from Trier, who on a visit to England, fell completely for camellias, had the same experience. "Many a garden was a dream", says he today looking back on events. Dr Hackländer started to collect camellias. Most of them he brought back from abroad in his suitcase. He does not keep them inside at all, but outside the whole year round. In the cold season he puts the plants together close to the house and covers them against the frost with plastic.

In the autumn of 1983 Dr Hackländer planted for the first time nine camellias called 'Elegans' in the open in a peat bed. For this purpose he dug a deep hole, lined it with polythene and filled it with peaty soil, a layer of pine needles, turf and sand. For manure he used only old cowdung. His 'Elegans' survived their first winter well in their narrow bed sheltered behind the house amongst pine, rhododendron and bamboo, the flowers therefore being in little danger of freezing.

Our reader, Gerta Krickemeyer from Essen, had the following experience with her 10 year old camellia: "The first few years the camellia stood in the sun against a housewall. There it always flowered early and the blooms froze. For two years now the camellia has been in the shade, only being in the sun from 4 p.m. Here it blooms eight weeks later, at the end of April - beginning of May". This year - Gerta Krickemeyer counted them carefully - her camellia had 117 blooms.

Those who already have practical knowledge of camellias in the open or who simply would like to meet like minded people can contact Peter Fischer at Höden 16, 2177 Wingst or the Trier collector whose address is: Dr Klaus Hackländer, Simeonstr. 5, 5500 Trier.

The camera and the garden — some hints

Le jardin et l'appareil photographique — quelques conseils

El jardín y la cámara — algunos consejos prácticos

Il giardino e la macchina fotografica — alcuni suyggerimenti

YVONNE J. CAVE, APSNZ, ARPS

*see colour section

The Camera You do need one of these and for general shots of a garden any type or make can give satisfactory results. Fixed lens cameras will record, given reasonable lighting conditions, views of bedding plants, borders, trees and shrubs, just as well as those with interchangeable lenses. Should you want to include good close-ups of flowers, it is then that the inadequacies of the cheaper cameras become apparent, as they will not focus close enough. There are other advantages with the more expensive cameras that I'll explain later. To get consistent results from your camera you need to feel relaxed with it and operate it as automatically as you would drive your car. Far too many people buy a new camera as they leave for a trip and then, when the critical time comes for taking the shots they dreamed of, they don't know whether there's a film or battery in the camera nor do they know how to load either of these correctly. Disappointments follow with films that haven't been going through the camera or films taken with the lens cap firmly in place and some with the ASA on the wrong setting giving useless results. You would save more money by purchasing a camera locally well before travelling and familiarising yourself with its workings, ensuring that the results are to your liking, rather than buying at a duty free store on the way.

The Film There are many types of films on the market and most of them will give good photographs, but to begin with you have to make up your mind whether you want prints or slides. Prints are very useful in that you can hand an album around to friends for instant viewing and you can also have any number of them printed, but should you be in a position where you want to show your photographs to large numbers of people, then colour slides are the best. You can also have slides duplicated, but often the copies are a little harsh in colour and contrast. The brand of film you use may be determined by trial and error, but for good even results the Kodak films are reliable. The prints you finally receive from colour negative film can vary a lot in successive printings from the one negative. You're dependent on the firm who does the printing for the colour in your prints because the filtering they use in exposing the negative makes a tremendous difference to the resulting print. With colour slides the projector you use, even the type of lamp and screen can affect the colour a little too, so the brand of slide film I use may not necessarily suit your projection equipment. Kodachrome 64 gives me pleasing results for the mixture of subjects taken on my camera which vary from landscapes, gardens and flowers to people. Camera lenses can give slight colour variations to film too, so here again trial and error to suit your gear and personal preference with critical evaluation are necessary.

The ASA or ISO Every packet of film you purchase will have this strange lettering on it. Kodacolour film has a large 100 in white figures on black and this is the film speed rating that must be set somewhere on your camera before you begin pressing the shutter button. This governs the settings on your camera to suit the speed of the film. Should you want to take photographs in an area known to have very low light, you can purchase a film with 200 or 400 or even higher ratings. If you fail to set the ASA rating on your camera, the photos you take will be either under or over exposed, that is taken on too long or too short an exposure and will come out either too light or too dark. Even if your camera is an automatic one, it is essential to check that the ASA is set according to your film rating and should you change film types, always watch that the setting matches the film packet. Many films have been ruined through neglecting this important setting.

The Lighting Because it's the light that gives images on our film, lighting is an important factor in achieving good photographs. You'll notice that on a dull day the shapes and outlines of flowers, trees and hills merge into each other, whereas on a bright sunny day the outlines are clearer. For even crisper outlines

backlighting, that is with the light towards you, rather than from behind, gives interesting shapes and helps makes objects stand out from each other. Textures on walls, banks, foliage and flowers and moulding in landscapes come up best with strong cross lighting and give pictures with a lot of punch. Soft morning light and even fog or light rain can give the best conditions for bush interiors or shots in a densely planted garden of trees and shrubs. The mist seems to bring light into the shadow areas and lift them, whereas on a bright sunny day you would get very heavy black shadows. Harsh bright sunlight often causes so much contrast that it becomes too much for the film to handle and results will show patchy burnt out areas over foliage and again the dead black shadow areas. The light recommended by the film manufacturers is with the sunlight over your shoulders, but this tends to give very flat results with no textures or moulding in the subjects of interest and is rather boring. It is then important to look at the garden you're photographing from different angles of light and you'll learn to select the angle of light that is best for the subject. Colour intensity in your flowers can be either enhanced or degraded according to the angle of light and again, you can, by careful observation, see which angle is going to produce the best colour by moving round the flowers.

The Composition What you see in the viewfinder is what you get back in your photograph, so make sure it's the area you want to see again because it's not going to improve during processing. Most people stand too far away from the point of interest, so generally it pays to move in closer. Check that there is balance to the area you're looking at — don't have a heavy dark mass on one side with nothing or something very light in colour on the other side. Shots with half sky and half landscape aren't usually satisfying, so lift or drop the horizon line according to whether the sky or foreground are the most interesting. Paths can be used as good lead in lines, providing they lead to something interesting and don't occupy too much of the picture area. Make sure the line doesn't take your eye straight out of the picture. Pleasing frames for your shots can be found through tree trunks, branches or archways and gates. If you want to have a really close spray of flowers or leaves in the foreground with garden beyond, it is necessary to set your lens on a small F stop or aperture such as F16 to give depth of field, but this can only be done on cameras that you can operate manually. In soft or low light this might mean a slow shutterspeed and this in turn can give problems with camera shake, so a tripod can be used to keep the camera really still. The angle of view can make a tremendous difference to a photograph and it pays to look at the options before pressing the button. When you move in close to small plants or flowers, try to get an angle that is pleasing to look at. Too often photographs are taken of plants, like those of children, from an adult viewpoint looking down, when it's usually much more interesting from a lower angle where you get, as with children, a much more intimate picture. There are exceptions of course. You might want to get an unusual pattern from directly above a small plant. A higher or lower viewpoint often gives more impact to certain areas and with interchangeable lenses we have a further means of adjusting this angle. Various wide angle lenses can bring in a much wider field of view and can be good in confined areas, but the background does diminish with the very wide ones. On the other hand, telephoto lenses can bring up things to look closer together, fill the format better and give more impact. Zoom lenses can be handy where you're getting varying points of view around a garden and allow you to bring up just the area you want to record, eliminating the extraneous. Watch out for ugly stakes and labels. If you can't remove them, a change of angle can often screen them from view.

The Closeup All my closeup photographs are taken with an old macro lens on a Pentax MX and this lens allows me to focus on a 35 mm transparency and photograph that 1 to 1 at its closest. The standard lenses on most cameras will not focus as close as that, but the better ones will focus close enough for camellia photography. Some of the macro-zoom lenses are very good too. In close up work there are problems with depth of field — that is the shallow zone of sharp focus. A small F stop and a slow exposure are often needed to bring most of the required area into sharp focus in closeup work. A balanced composition is just as important in closeups as any other type of work and the lighting must be interesting to give form and texture. The choice of a good flower or flowers without blemish is a must — photography doesn't hide blemishes. Closeups are demanding but they are rewarding and very useful to give variety along with the general views. All long distance shots or all closeups can become monotonous, so changes of view give better balance to your photography.

The Conclusion Obtaining consistently good photographs of the many aspects of our landscape, trees, gardens, plants and flowers requires a good deal of concentration and thought. They don't just happen, and as I've pointed out, familiarity with your equipment is half the battle, followed by practice and experience. Try to analyse your efforts and work out why certain things have happened and repeat these if they're good and eliminate them if otherwise. Discuss any problems you have with other photographers whose work is better than yours. Study the photographs you like in books and magazines and work out why they have been successful and then try to incorporate those elements in your own work. With a certain amount of self criticism you'll soon improve your photography and gain a greater satisfaction from your hobby. It is indeed a useful hobby and worth doing well because it can be shared with others in so many ways.

Nomenclature report

Les nomenclatures — un compte-rendu

Informe de nomenclatura

Relazione sulla nomenclatura

THOMAS J. SAVIGE
International Registrar

The previous report brought the work done up to completing a written manuscript of about 23,000 entries as a nomenclature check list that included cultivar names with publishing reference and date only.

The resulting consensus of opinion was that such a list was of interest only to a few groups interested in nomenclature and not worth the expense of publication. It was pointed out that Recommendation No. 2 for the guidance of Registration Authorities in the appendix to the International Code of Nomenclature for Cultivated Plants required that Registration Authorities should publish full lists of cultivar names including a description and history.

Therefore the task has begun of rewriting the checklist into the "International Camellia Register" and feeding this information into a word processor. The word processor being used is a Tandy Model TRS-80, 128K with a 15 megabyte hard disc storage connected to a Tandy DWT-4 Daisy Wheel Printer. With this equipment it is possible to programme facilities for printing the "program aids" for all languages used. This includes grave and acute accents, umlauts, cedillas, vowel bars etc.

As Camellias can be long lived trees (plants with ages in excess of 400 years are known), it is rarely possible to be certain that a particular cultivar is no longer cultivated somewhere in the world; therefore all names that have been published for Camellia cultivars as far back as records go (1525) are included in the Register.

Valid names are printed in "boldface" and non-valid names stepped back and printed in ordinary type. Valid names are the prior published name as set out in the "Code". Non-valid names include, "synonyms"; "erroneous names"; "Orthographic errors"; "orthographic variants"; "abbreviated names", and "different readings" of oriental characters. It was decided to list all spelling variants of a name to assist those with only a mis-spelt name to locate the valid name.

The listing of a valid name is followed by a species or group name to which it belongs, then by the first valid listing located which, if possible, included the name of the author, and the publication with date and page number. This is followed by a description, if available, the flowering season and a brief history, which includes any known information on origin and originator, synonyms and other non-valid names, mutations, awards, country of origin and a reference to published illustrations.

As most of this extra data had not been included on the extract lists and file cards, it is taking considerable time to extract and record. However Sections "A", "B" and "C" are fully written out and, based on the size of these sections, it is estimated that the total number of entries will reach 30,000. Also that there will be about 2800 sheets of A4 printout from the word processor.

It must be said that new information is continually coming to hand that requires additions, deletions and changes to the text, therefore the entering into the word processor must be delayed until all sections are written out in full.

An "Introduction" for the Register has been drafted. This describes in detail how the Register is compiled and the reasons for adopting certain principles. This "Introduction" is subject to change as the Register evolves.

The word processor approach was adopted as the text and date are capable of being corrected and modified right up to "printout" for publication. A second advantage is that it makes possible the most inexpensive method of publication.

In this method each page is set out on the word processor, paginated and proofed on the screen. When ready for printout a new daisy wheel and carbon film ribbon are inserted in the printer to give clear, clean text. The publisher then takes each page of printout and, by photo-reduction to a suitable size, produces a printing plate that requires no type setting or proof reading.

2800 pages would produce 1400 leaves which would require to be made up in two volumes.

Because of their thickness they would need to be bound. At the present time, in Australia, the cost of producing 1000 copies by this method is estimated at 30,000 dollars Australian. The cost of normal publishing with set type is variable, depending on type size, quality, paper and so on. However it would produce a more prestigious publication, probably with less pages, and permit the use of various type faces such as italics for species names etc, which the first method does not. However the cost would be greater.

It is estimated that, to write up the full manuscript of about 5000 A4 size pages will take to the end of 1985 and to put it on a word processor until the end of 1986, unless the salary of an operator can be found when it would be possible to finish both about the same time, the end of 1985.

A personal account of the I.C.S. Spring Tour of 1985

Compte-rendu personnel du voyage organisé par l'I.C.S. au printemps, 1985

Una relación personal del viaje de la I.C.A. en la primavera de 1985

Un resoconto personale del viaggio della I.C.S. nella primavera del 1985

MARION SMITH
Jersey, C.I.

For those of you who have never been on an I.C.S. Tour, Conference or week-end, this is an attempt to explain why I enjoy these events so much.

I met members of the I.C.S. for the first time when the Conference was held in Jersey 4 years ago, and my friend Miss Margaret Scott was presenting her paper on her work on Camellia propagation. Since then I have met some of those members present several times and in 1984 my husband and I were lucky enough to go on the tour of China which was so fascinating, and which you will have read about in the last I.C.S. Journal.

Because Jersey is a small island of approximately 12 miles × 6, when we go away we are always keen to see as many other places as possible and we love seeing gardens wherever we can. Consequently the Tour of 1985 fulfilled my expectations admirably. Unfortunately, I was unable to attend the Conference in Brighton but I travelled there to join the other members, and this immediately started off my week's holiday in fine style, as I stayed the night with Pat Macdonald of New Zealand. I had last seen Pat and her husband Ron in Hong Kong at the end of our tour of China last year so we had a whole year's news to catch up on!

What a lot we *did* see in the following week! and places I would probably not have had a chance to visit if it had not been for this tour.

Travelling via Worcester, where we visited the Cathedral and the porcelain works, we went to lunch with Nancy and John Tooby, who produced a delicious buffet for two coach loads of hungry I.C.S. members. I would love to have spent more time looking at their garden which shows evidence of John being a great plantsman. Everything was so beautifully labelled it was a delight to be in it. Then we wended our way up to Bettws-y-Coed in North Wales through the very pretty countryside with streams and rocks on each side of the narrow twisting road. Our skilled drivers had also to avoid the hazards of the sheep, many of whom had their twin lambs with them.

The next day we visited a working woollen mill with a shop full of high quality goods which was especially interesting for our 30 ± New Zealand members to be able to compare with their home products. We arrived at Bodnant Gardens, which had been one of the temptations of the tour for me. We were extremely lucky in having a fine day and the gardens were at the peak of perfection with regard to the Camellias, Rhododendrons and Azaleas. There is also an excellent retail nursery under the supervision of Mr Martin Puddle. I had been lucky enough to go round the garden with his father Mr Charles Puddle (who has now retired as Head Gardener) and Signor and Signora Wladimiro Abbate from Caserta in Southern Italy.

I was pleased to be told the nursery could send plants to Jersey, so when I returned here I received 2 large boxes and now have some interesting plants growing in my garden, including several dwarf Rhododendrons and an *Os-*

manthus delavayi (which had reached the size of small trees at Bodnant). These will remind me of that much larger garden.

I enjoyed the visit to Caernarvon Castle and crossing the Menai Straits to the Isle of Anglesey, we went to Plas Newydd. Another lovely day to remember!

We left North Wales and drove down the beautiful Wye valley, stopping for lunch en route at the ruined Tintern Abbey.

Of course I had often seen photographs of Stourhead in Wiltshire which is so famous for its landscaping. It was a great pleasure to see the reality and to sit on the grass on the banks of the lake with my friends Mrs. Vi Lort-Phillips and Lady Susanna Walton (whom I had not seen since our tour in China), and to look across the lake at the perfectly proportioned Temple of Apollo. Also to see the other famous views across water to the Pantheon and the elegant Temple of Flora built in 1745.

The next day was Sunday which was a good day to have our walking Tour in Bath because, as the shops were shut, the centre of the city was peaceful and not crowded. How interesting it was to see what has been achieved and how splendidly the archaeological remains are being displayed with superb lighting and clear labelling. Not at all a "fusty-dusty" image! Our excellent guide told us that when we visit Bath in the future there will be a natural hot bath open for the public to swim in. We then passed close to the University and the American Museum. It was not on our tour schedule to visit this but our guide knew I wanted to go to it and kindly stopped the bus for me to get out. I had a lovely time in that garden before I went inside and saw the collections of furniture, pictures, silver, porcelain and patchwork quilts. I caught a bus back to Bath and rejoined the rest of the I.C.S. Members at the Botanical Gardens which were well worth visiting.

Monday 20th May started as a cold wet day, not at all "Spring-like"! We stopped briefly at Stonehenge which I have always wanted to see. It was disappointing to see guards in the process of surrounding it with barbed wire but we were told this was a necessary precaution to prevent the public doing any damage at the forth coming Pop Festival.

Quickly the weather improved for us to visit Exbury Gardens with the Rhododendrons and Azaleas at their finest and in the sunshine. The garden is only open to the public for 10 weeks at this time of the year to see these plants, which far out number the Camellias of which there is also a considerable number. But then Lionel de Rothschild's main interest was in making a collection of Rhododendrons, and what a lot of pleasure he has given to all those who have visited Exbury Gardens.

We were able to visit Hilliers Arboretum and have a brisk instructive walk around, casting anxious glances at the darkening skies before the rain started again. This was another wonderful day with two wonderful places to visit!

We stayed the night at a very comfortable Hotel at Brockenhurst in the New Forest which was surrounded by the ponies and their foals. It was sad to hear how they had suffered from the severe weather of early 1985.

On the eighth day of our tour we went to Chartwell which has been left much as it was when Sir Winston Churchill lived there. I liked the gardens (including the Golden Rose Garden planted for his Golden Wedding Anniversary not yet in flower of course). I went round this garden with Mrs Pat Widdas from S. Africa whom I had not met previously to this tour. We looked at the long brick wall built by Sir Winston during the time he was out of office, when he was also writing his "History of England". Then we went to his studio, the walls of which are covered in his paintings from floor to ceiling. I particularly liked a painting he did of a Street scene in Marrakesh, (Morocco) which shows an intensity of light and colour. It is reputed that his answer to those who criticized his paintings as not being great "works of art" was, that he painted "for his own pleasure" and this certainly comes across. What a versatile man he was! Building brick walls, painting, writing and being one of England's greatest leaders in Parliament. We spent the night in Bromley where there is the Churchill Theatre and 3 of us went to a play in which Edward Woodward (Callan on T.V.) and his son acted.

What more could one ask for a grand finale to our tour than the Chelsea Flower Show. It was about six years since I last went to it and it was all the more enjoyable to go together with old and newly-made friends in the I.C.S. Of course, during the day, I also met 4 people from Jersey with whom to swop impressions!

Perhaps this account of how much I enjoyed the Spring 1985 I.C.S. tour will have conveyed a little of why I, personally, look forward to the highlights in my gardening Calendar. After all — it is sheer relaxation, enjoyment and a few days off of peace and change from one's everyday life.

Since my return, I have had several letters

from my friends made on the 1985 tour. One from Dr. Bob Withers of Melbourne, Australia, who very kindly sent me some of his lily seeds. I last saw him and his delightful Greek-born wife Hari on the day we went to the Chelsea Flower Show. Hari was muttering, to my amusement and understanding, that she was "just off to see her marbles in the British Museum".

That's life!

C. chrysantha —a Progress Report from Australia

Camellia chrysantha — un rapport

Camellia chrysantha — un informe

Camellia chrysantha — une relazione

A. E. (PETER) CAMPBELL
St. Ives, Australia

Two accounts of the introduction of this fascinating species have already appeared in "Camellia News" the official organ of The Australian Camellia Research Society, see Nos. 83 and 91 published in December 1982 and December 1984. The first traced the introduction of seeds from Kunming in the Yunnan Province of China to Australia, the seeds being received by Mr. Harold Fraser of Wagga Wagga and Mr. Tom Savige of Albury, the latter a former President of the I.C.S. Both were succesful in raising the seed and one of those raised by Harold Fraser eventually found its way into the possession of Camellia Grove Nursery of St. Ives. The second account traced its progress at the Nursery which lost no time in propagating this material, making two cleft grafts on four year old *C. hiemalis* 'Kanjiro' stock in July 1981. It may be mentioned here that this Nursery places great confidence in the use of 'Kanjiro' for all forms of Camellia grafting. It readily produces an abundance of good strong roots which are very resistant to Phytophthora and is compatible with all the common species of Camellias. Further cleft grafts were made on similar stock in 1982. All these grew with great vigour and by December of that year there was sufficient material to commence a programe of "cutting grafts". For an explanation of this method of Camellia propagation, see p.25 of the I.C.S. Journal No. 16. By the end of 1983 the Nursery had quite a collection of *C. chrysantha*, all of which had originated from one seed. The plants were, of course, of varying sizes but all showed the same remarkable vigour and just grew and grew. The Sydney climate is not unlike that of Nanning in Southern China, the home of *C. chrysantha*, being warm and humid. The new growth is very attractive being almost purple bronze in colour and the leaves show the pronounced "quilting" one associated with *C. granthamiana*.

However in spite of all this, there was, disappointingly, no sign of a flower bud anywhere, and it was felt that perhaps, as all the plants were of seedling origin, a long wait for flowers was likely. Then an extraordinary thing happened — several of the very small plants produced by the "cutting graft" method in December 1983 showed buds. But if these tiny plants proceeded into their first growth cycle, the buds withered and fell off. Fortunately some of the plants retained their buds and these opened progressively for about a month commencing from 16th August 1984. Of the plants propagated last December (a year later) a number are now showing buds and will doubtless flower this August/September, but none of the large plants, now in their fifth year and at least six feet high show any sign of flower nor do those which flowered last year!

This was particularly disappointing as it was felt that those plants, having flowered last year, should do so again this year. So it was decided to enlist the aid of Dr. Peter Valder, who is lecturer in Biological Sciences at Sydney University as well as a horticulturalist of distinction.

Dr. Valder believes that many plants which are well grown do not produce flowers in their youth unless they are badly treated and placed under stress. He points out that the small cutting grafts of *C. chrysantha* which did flower did not produce growth i.e. the graft, though successful, was not very good and so the scion was under stress and produced blooms. He instances some seedlings of *C. oleifera* var. *con-*

fusa which he raised from seeds collected in N. Thailand. Some plants, now in his garden five feet tall and growing strongly have never flowered but some cutting grown plants, very pot bound and neglected, flower regularly. So he suggests that a tight wire be placed around the stems of some advanced plants to see if this will induce enough stress to cause the setting of buds. He also thinks the use of a fertiliser high in phosphorus and low in nitrogen could be useful. It has long been noted in the growing of citrus trees that, when under extreme stress and about to die, they produce a great abundance of flower and fruit before they expire.

Dr. Valder's views are strongly supported by Mr. Harold Fraser, one of the importers of *C. chrysantha* seeds, who has lately been doing some research on the commercial production of tea (*C. assamica*) in Australia. He reports that tea plants are always grown from seed, any subsequent flowers being of use only to produce more seed and not, as the Chinese say "for admiration". It appears that the presence of a tap root in tea plants is important for the production of maximum foliage. In order to make young plants seed they are heavily pruned in their second or third year and as a result produce a great quantity of flower and seed. All of this leads us to a very interesting series of experiments for, though *C. chrysantha* will probably make a great addition to our gardens for its ornamental value, quite apart from its flowers, most will grow it for its hybridising potential. Just imagine a yellow or orange 'Dr. Clifford Parks' or 'Valley Knudsen'.

So there are two things to do. Firstly induce our plants of *C. chrysantha* to flower readily and then embark on a hybridising program. The second of these objectives will be, by far, the more difficult. Last August/September the Nursery gave pollen to various hybridists but no seeds eventuated. They will do the same this year but one only has to refer to the article by Prof. Xia Lifang of the Kunming Institute of Botany on p.18 of the I.C.S. Journal of October 1984 to see how long the odds are for success.

It appears to the writer that so far *C. chrysantha* has only been used as a pollen parent, and it may well be that success will come from using it as a seed parent.

Camellias in a Sussex garden

Des camélias dans un jardin du Sussex, Angleterre

Camelias en un jardín de Sussex, Inglaterra

Camelie in un giardino del Sussex, Inghilterra

A report on the hardiness of camellias during the winter of 1984/85

I.C.S. Member RICHARD WILLAN

Lurgashall, Petworth, Sussex, England

Lurgashall is about midway between Haslemere in Surrey and Petworth in Sussex. My garden is in a hollow, where a little stream runs, and is by no means an ideal site for Camellias, even adverse, since the soil is generally speaking a heavy clay, water-logged in winter and drying-out in summer. It is subject to late spring frosts and fairly low temperatures during cold spells.

I have not been able to obtain any temperature recordings from anyone locally, but the met. office has kindly given me data from their nearest stations at Rogate, west of here and for Gatwick, east of here.

Minimum readings of minus 10°C were recorded on several days in January and February at both stations. The lowest was minus 12.4C at Gatwick on the 13th of February. The grass minimum was minus 17.3C on that day. At Rogate it was minus 11.7C. There were cold spells of several days at a time in January, February and March, when temperatures went below freezing and in January and February fairly heavy snow falls with subsequent freezing and glazing of foliage. It is possible that even lower temperatures occurred in this garden than at Rogate or at Gatwick.

All my Camellias are outside and came through the winter remarkably well with very little bud loss and so were covered with blooms later. The only casualty was a small bush of 'Elsie Jury', which was overwhelmed in a snow-drift and partly broken. All the buds were damaged and there were no blooms later.

Another nondescript single pink, unnamed, had lost its buds before the end of 1984. It is obviously unsuitable and I will replace it.

Most of my plants are small, being about one metre or a little over but two of the earlier plantings are over 2 metres. They are:

1. 'The Mikado'. Very sensitive to cold but when perfect blooms are produced they are really lovely.
2. 'Leonard Messel'. Very reliable and usually covered in blooms as this year.
3. 'Inspiration'. Very reliable.
4. 'St. Ewe'. One of the best; covered with blooms this year.
5. Miniature double pink. Unnamed. Brought as a small rooted cutting from Kathmandu, Nepal about 1972. It flowers very early and is sensitive to cold but does flower well in most years - very charming.
6. 'Eugenie de Massena'. Flowers profusely every year.
7. 'Midnight'. An excellent dark red - covered with blooms this year.
8. 'Are-jishi'. Planted early in 1984. Flowered very well this year. An excellent red.
9. 'Adolphe Audusson'. Very reliable and cold resistant.
10. 'Donation' Usually covered with flowers. Only a small plant as yet.
11. 'Elsie Jury'. Flowered well in 1984. No flowers this year.
12. 'Janet Waterhouse'. Flowered beautifully in the spring of 1984. Fewer blooms in 1985 but still good.
13. 'Mary Costa'. Flowered profusely this year but sensitive to cold as are other whites.
14. 'Mathotiana alba'. Probably not suitable for outdoors. This was planted some years ago before I knew anything about Camellias. Blooms very well but spoilt by cold nights.

This year I picked bunches of blooms of all the above except 'Are-jishi' which is a bit too small. The quality of nearly all of them was excellent. Only the whites were affected by cold but I did get some good blooms.

The last winter has shown that the Camellias I have are remarkably hardy. At the moment the foliage of all my plants is in excellent condition, beautifully green and glossy so that I am looking forward to a very good flowering again next year.

Journey in China — May 1985

Un voyage en Chine, mai 1985

Viaje por la China, mayo de 1985

Viaggio in Cina, maggio 1985

HAROLD FRASER
Wagga Wagga, Australia

*see colour section

I arrived in Kunming, the capital of Yunnan, on my own during the last week of May in perfect spring sunshine after the humid heat of Canton, to be greeted by an old friend, Mr. Feng Xiao Jian, Asst. Director C.I.T.S. He told me excitedly of the visit of Sec. Gen. H. U. Yao Bang to Kunming a few weeks before in the Camellia season, who had praised the Garden of Friendship, saying "The finest gesture ever of friendship made to the People's Republic of China by our Western friends" and urged Kunming to develop a 10,000 MU (about 700 hectares) as a peoples' Camellia Park. Being part of a 5 year plan currently in progress, this was something to remember after our 1984 organisation.

What a greeting and challenge to help again our many friends in Kunming, wider Yunnan and people of China.

I was met by Prof. Wu-Chang-yi, now fully recovered in health, Dr. Zhang Aoluo, now head of the Academy of Sinica Yunnan, his wife M. Xia Lifang and Dr. Guian Kaiyuan, Asst. Director of the Institute.

Enquiries by my hosts concerning friends in previous visiting groups occupied some time. Discussions on the replacement of lost plants for the garden of 1984 took up most of the evening over supper, in my suite on the 12th floor of the great new Kunming Hotel, looking over to the sunset on the western hills. I was, however, able to hand over some 12 replacements and a number of scions delivered in less than 48 hours from Wagga Wagga and saw them planted safely in pots at the Institute a few days later, with no ill effects from quarantine inspection. It is possible to go from Wagga Wagga to Kunming in 28 hours once weekly.

Dorothy, my wife, could not come with me so I travelled alone, a unique experience.

Our dear friend (since 1978) Dr. Guian Kaiyuan who met me on arrival at the Botanical Institute, gave me an emotional welcome and conducted me to the Garden of Friendship showing plants in nursery care for autumn planting. All were doing well. I assured Dr Kaiyuan and M. Xia Lifang that replacements would be sent soon from Australia. They were much relieved and accepted with expressions of gratitude my plants and gifts of books etc. brought from Australia.

An inspection of the much enlarged Research Nursery previously closed to Western visitors since 1982 was a delight. Falling rain and warmth had resulted in a flush of glossy shining growth. Again I saw evidence of some of the extension advice given previously on potting mixtures, bearing fruit.

Great interest was shown with much questioning about our *Camellia chrysantha* growth in Australia. My photos were compared, and the growth they showed was more vigorous than plants of a similar age in this nursery area.

A trip to Mt. Lijiang, N. W. of Kunming to see the famous *Camellia reticulata* more than 500 years old, on the slope at about 9000 ft, was the next highlight.

Prof. Wu, Dr. Zhang and Dr. Guian and C.I.T.S. Kunming were anxious that I should make a survey trip and be the first westerner to do so as it is hoped to conduct special visitors to this glorious area next year. (Note: LIJIANG the highest Mt. and Range in S. W. China).

So after a medical check and formalities at the Foreign Affairs office, I set off early one morning, carrying a special permit, in a brand new Toyota Crown car with an ex-Army driver of mature age (20 years driving trucks on the Burma Road) and a charming English speaking guide, seconded for my trip from the Reception desk at the crowded Kunming Hotel, Miss Chen Bing. The weather was fine and hot, specially in the valleys, but clear and crisp on the ranges. We had to cross on our W.N.W. leg to Dali. The car travelled faster than a bus and in my back seat position I could spread my viewing range. The fresh green foliage and the varying colours were in marked contrast to my 1982 and 1984 journeys. In the valleys green rice and the golden wheat were maturing and some were being harvested. Bumper crops were evident.

The Burma Road is much improved and duplicated in the Great Gorge but carries a mighty traffic load including petrol convoys and consumable stores, steel and machinery to the west, timber in log form, return empty fuel waggons and coal, produce etc. East bound. The skilful driver, weaving his way in such heavy traffic that I have not seen elsewhere on a mountain road, was fascinating; unable to speak English he gave a running commentary translated to me by the Guide.

We reached our lunch stop in the city of Chuxiong at the refurbished Hotel, to be greeted by mine host in immaculate Western Morning Dress, speaking good English. After toileting and tea, I was escorted to a small private room for a splendid meal and wines. Then in filed 8 well dressed men and a lady. They smiled, ate half their meal and the host then told me that they had followed me down from Kunming Agricultural University, one came from Beijing, to show me some of the new wheats they were growing for seed increase from small ½kg packages which I gave them in 1980 and 1982.

This was an honour and surprise if ever there was one. After toasts, short talks, a rest, a farewell by Dr. Li Deh Sing, Prof. of Agriculture, and a ramble through the colourful grounds of Chuxiong Hotel complex, sharp at 1.30 pm my devoted driver beckoned me to the car and we set off westward into the hot sun. In between 'cat naps' I would wake to see the vegetation on the hills around Nanhau. White and pink Rhododendrons made a floral spectacle on the high range tops and slopes. Due to the very heavy traffic flow my driver would not stop, so we passed on and in the valley below some fine wheat crops were inspected on a side road lined by Australian gums. To see these seeds increase plots was a great thrill. On we pressed to Xiaguan (Dali) on shores of Lake Erhai, travelling faster than Marco Polo in 1270's along this way. The driver was anxious to get me to my destination early so that I could examine further cereal crops. The location of these being given to my guide by the group mentioned earlier.

Climbing the scenic but winding road to the final drop down to Dali, the view down into the valley was like a grand mosaic of green, red, brown and amber as one looked East to the mist covered mountains of Yunnan, in all their glory, with the great Changshan Mountains (of 19 peaks) snow caps visible to the north east on the left.

The Burma Road to the frontier junctioned before the drop down in the vicinity of Fengyi. Here a riot of pink to white coloured Rhododendrons became visible as we reduced altitude. On the run in along the flats to the new city of Xiaguan, a stop was made to inspect mature wheat crops, some in harvest. Here farmers proudly conducted me through high yielding crops and I appraised them (more than 50 years experience) to yield a bumper harvest of 90 bushels plus per acre, and had the details translated back. When to a then gathering audience it was revealed that I came from Australia's farming country and the gums close by were from there too, and my age revealed — past 70 — I received a grand welcome in loud handclaps. China is harvesting another record harvest of grain and I can vouch for the accuracy of such claims. I have seen four in a row.

After the "Field Day" (many of these I have arranged in N.S.W.) I had to leave so that the car could be serviced at the large station on the city outskirts. We had priority at the head of at least a kilometre of double traffic, many large new trucks were visible. Here I was able to gaze up the steep mountain slopes of Changshan, recalling the climb of 1982 to see the famous *Camellia reticula* — of 10,000 blooms only to find it severely pruned a few days before and see its removal by pack ponies, for sale as firewood in the free market in old Dali!

On time (8 hours from Kunming) we drove into the crowded city streets to disappear through a guard of medical clinical trucks to park in front of the Hotel. It was like "Home" to be greeted by my friend Commandant Zhong Li alongside his official Volvo car. So nice to see my friend a 3rd time. On the landing outside my room waiting to see me was Dr. Zheng Ling Cai M.D. Medical Supervisor of countries outside Kunming city. He had his team with him bound for Lijiang. He checked my health in a friendly way saying his department was concerned that I should take such a long journey at my "advanced age" (I was amused but thankful). Supper over and the night was hot, I was glad to take the cool air and sit on the banks of Lake Erhai till the "Phone wind" with its high velocity and noise drove me indoors. I did not however see the legendary Dragon in the Lake who was credited with this nightly occurrence in Summer.

Xiaguan means "Windy City". The three famous ancient Pagodas were built to watch for the great Dragon when the wind blew.

An early start was made next day, with a

quick drive ahead of traffic to the North on the Tibet Highway past Butterfly Springs (Marco Polo turned back at this spot on his return to Venice) climbing steadily past the end of the Lake up a very steep mountain pass, on a wide scaled highway. We encountered a severe Market Day jam in Bryuan but pressed on to the important road junction at Jianchuan whence a road goes to the Indian Frontier. Here the scenery is sublime; tier after tier of Mountains. I was told I was the first westerner to come by this newly opened way to Tibet. What an honour and how kind my friends in Kunming were to arrange in all detail such an historic journey (even Marco Polo could not make it!) but a little old Australian was afforded such an honoured opportunity to see this "New Area" shortly to be visited by selected special visitors en route to Tibet and the border some 600 km away. The road climbed steadily beyond 10,000 ft with the slopes gay with Rhododendron species and far to the N.E. the snow capped range with its "Sleeping White Jade Buddha" came into view — glistening white. Mt. Lijiang 5596 m or about 17,200 ft in the Yulong Mts in the Naxi minority nationality area was a sight I will not let dim in my memory. Travelling a table land — rather droughty — I was able to pause at a large apple growing unit and potato farms (no cereal) and see a large tree nursery of Australian Flora, mainly Eucalyptus. Some wild rambling Roses gave roadside colour.

Pressing on towards Lijiang, capitol of Naxi, country on the lower slopes of Yulong range the Glacier glistened like silver as we drove into the old rather over-used Hotel complex with a heavy crunch, caused by a carpet of Rape being threshed by passing traffic on the clean concrete Highway where groups were sweeping and winnowing the grain. Arriving for a late meal at 2pm I was afterwards ushered into a clean humble room, no facilities save a wash basin, much like the Hotel Menindie N.S.W. in my visits there in 1930s and no change to the present time. Well, it was clean and the toilet and ablutions were public, some distance away in the City. I managed an excellent meal. It was Sunday and not a work day. My driver had been here once before and told me he did not like the place as it had no modern conveniences and nothing to do. T.V. was available in a hall from 7pm to 9pm only. Close by, a modern beautiful 100 bed Motel complex in full view of mountain scenery, will be ready in 1986. I was shown all over and scored it first class with its Dali stone facing and facility rooms being so clad in marble (Dali means marble).

The Commandant, Mr. Duan Nan Xing, arrived and greeted me saying I was the first westerner and oldest visitor to come into his area. He had a jeep and driver at his disposal. A 30 year old Japanese mountain climber and companion had come for one day the week before to climb the mountain but on advice from locals had turned back at 10,000 ft.

Next day, and back East to Kunming, my host took me to some nice small Public Gardens thronged with people. The lake was dry because of water shortage due to lack of snow and rain in this somewhat arid Tibet like climate. I was able to identify a few poor small pink *reticulatas*. There were many azaleas, rhododendrons, magnolias and roses (ramblers) — some very large. A large display of incredible bonsai in one closed wall garden finalised the day. Supper over in daylight, I strolled the streets of this modernising small remote city, attracting much attention by the T.V. and picture going inhabitants. All were very friendly and curious. A call in on a shop to purchase some local hand craft and a shirt made history I feel sure. Those watching had on their lips "and so western tourists are here", I could almost decipher from their expressions such a probable remark.

To see famous 500 year old camellia of 20,000 blooms on my second day in Linjiang area.

Arose at daybreak to see the eastern sun rise on the glacier. The transport was by jeep, as I was to go to see the famous Camellias on the mountain slopes at 9,000 ft, 30km away. The road was through small villages along a dry windy valley. The lanes were lined with Hawthorn and rambling Rose with wheat and barley crops. Again I inspected some new varieties. Non shattering dry land, low rainfall productions from base seed sent from Australia in 1978 following my first China trip. There is no irrigation here on this porous glacial soil in the valley. No rice. Rainfall is in the main confined to mountain slopes.

At length we left the flats and started to climb towards the Pine tree-covered slopes with a wonderful panoramic view southward and finally reached about the 9,000 ft level, we left the transport and walked to an ancient monastery, in a picturesque setting of pines, junipers, spruce and peaches in fruit. The ancient stone terrace displayed a huge Magnolia tree with 3 large branches from a base trunk 4 metres in circumference and claimed to be over 200 years old. The height was estimated at

more than 40ft, about 13m. In this tranquil Park we walked along a stone path to an ancient Monastery to be greeted by *Lama Nahdu* aged 62, coming there as a novice aged 11 (he was a Naxi local native) and an older *Lama* — Zan of Zan clan from Tibet aged 67 attired in Red robes. These holy men care for the monastery. Its paved small garden with pots of Peonies, Azalea, Clivia, Roses, Maple and a large *reticulata* about 3m (not old), Peach trees and over-hanging outside the entrance gate were Dawn Red Wood, Yunnan Pine and a large *Picea abies* and some Spruce.

Last but not least, the huge Camellia tree dominated the courtyard. "The tree of 20,000 Blooms" set in a pavement, was never watered or fertilized the Monks said. The senior *Lama* told me that the flowers are so dense that leaves are obscured and the new red shoots push off the flowers. Gradually as they mature a few blooms only remain and the fresh leaves are a most attractive canopy. Truly a delightful spot to meditate. The few flowers left resembled "Willow Wand". Examination of "The Tree" in detail showed that it was really 2 separate ones fused together, being trained espalier-like over a frame providing a shade house effect underneath where pot plants thrive. Such training no doubt assists flowering. The measurement at the fork has a girth of 1.30m, covering an area of 6m × 5m and a height of 3m with a doorway opposite the trunk. This area has an eastern aspect. The famous tree is under close watch. No flowers can be picked and no cuttings removed by any outsider.

This was a grand occasion and farewells and thanks were made over tea and some kind of local edible nut. We walked down through this old landscape to the waiting jeep to go further on by rough track climbing the mountain, winding amongst a variety of Pines and under cover of flowering azaleas and rhododendrons. Many alpines and creeping junipers were seen. I recognised many that grew in our garden in far away Wagga Wagga, and seen in many temperate climates too. At length the jeep could go no further and I set out to climb along the gentle track almost to the tree line at 10,000 ft plus. Looking further on to the ramparts, the air was rare and my progress was slow as I collected samples of the vegetation which I hoped to take away for recording, but I had to leave them behind in the "National Park" as my host explained nicely that it was a closed area. Lunch was served on the banks of the upper reaches of the Yangtze. Sitting on my coat on a prostrate juniper and in view of the great mountain, we were at 9,000 ft altitude, a majestic sight. The Yangtze makes a snake-like bend here because of the mountain range diverting it eastward and not in the direction of India and Burma, but on to the China Sea, and not to the Bay of Bengal as might have been the case if upheavals millions of years ago had been less violent.

Returning to the city was by a dusty hard track of glacial stones, a bone shaking drive, we rounded the entrance to my rugged Hotel close to sunset to rest. Supper was hosted by the Commandant before meeting a group of Agricultural Supervisors checking performance of newly introduced wheats which I had examined earlier that day. Kunming had advised of my coming and I had to converse for a while.

I was glad to retire early after a heavy day looking at so much new Agricultural and Horticultural treasures, an experience not given to a Westerner before in this remote but exciting area of Yunnan.

Rising at daylight next morning, a drive by car back to Dali by early afternoon was over the same landscape.

A visit to the large Erhai Park Camellia garden, containing an extensive collection not previously seen on visits made in 1982 and 1984, completed the 4th day's travelling — calling in on the Earth Quake station too — a first.

An early morning exit from Dali bound for Kunming was commenced in heavy rain and much traffic, lumber being the main cargo to be delivered to the rail head just beyond the city of Chuxiong, our half way lunch stop.

The Burma Road was in a "wet mood" as the wet season had broken; streams were rising and local flooding evident. Lunch was hurried with no rest time as my driver of 20 years experience on this road section was anxious to get ahead of flood waters and clear the treacherous gorge half way to Kunming as it had been raining for 4 days. We observed the gorge was a wash of red muddy "boiling" water and a landslide, no doubt started by a recent earthquake, partially closed our one way pavement. In rain, all hands cleared a track and a miracle in driving skill at slow speed brought us safely through a very rough mountain area to a more even terrain.

Our arrival back at Kunming Hotel safely at dusk brought welcome hand shakes from C.I.T.S. friends, and I gave thanks to a wonderful driver for such an historic journey in the cause of Camellia knowledge and Agriculture

too. I shall never forget it. What a trip it was — over 2,000 km. Heavy rain and floods caused me to abandon a trip to Simo and the Mekong and go on to Beijing.

(Editor: It is hoped that a report on the second part of Harold Fraser's journey will be included in the Journal for 1986).

Dubia or Dubious?

Dubia ... ou Doute?

Dubia o dudosa?

Dubia oppure Dubbia?

MRS. VI STONE
Baton Rouge, USA

*see colour section

This tale probably spans twenty years. My personal involvement began about fifteen years ago when I purchased twelve plants which I expected to use as understock for grafting.

It was a very cold day in early February so I took two of the plants into the greenhouse, sawed them off, and dropped the tops near the heater. After the grafting was completed I gathered up the tops to throw onto the trash pile. I was almost overcome by the fragrance; much like hyacinths. At this point I called to Hank to bring a shovel and we immediately planted the remaining ten plants in a small bed in our side yard (garden).

The following spring the plants were about three feet tall. All along the branches at the axil of each leaf were these tiny, lovely, very soft pink fragrant blooms. Everyone who came by to see our Camellias in bloom went home with a branch of the blooms. No one in our area had experienced fragrance of Camellias at that time.

The first knowledgeable Camelliaphile who came by was Hody Wilson of Hammond, Lousiana (an American Camellia Society Fellow). His first expression was "it is a *sasanqua*". I then asked which *sasanquas* bloomed in February. Our normal blooming time in this area being late October, November and into early December. I then pointed out the blooms underneath the foliage (like those of most species); the dull green foliage varied in size, and was of very soft texture. Next I pointed out the long willowy branches and the pubescent stems and underside of the leaves, which were like most *rusticanas*.

Through a procession of years I sent scions to Camellia hybridizers and large growers all over the USA and to many overseas countries, in the hope that someone could identify the blooms. Thomas Perkins took two small plants to China during the "Friendship Tour" and has been advised that they were not 'Dubia'. Dr. William Ackerman and Tom Savige have told me the same thing. Tom Savige saw the plants when he visited us, but they had finished blooming.

The nearest bloom to this is the Tiny Princess, but the colour is much deeper. It has seven to nine petals, very pale pink shading slightly deeper around the edges. The stamens are sparse and a deeper pink and the pistil is slightly twisted. Sometimes it has set seed, which I have given away. The foliage measures from three inches long by one and one fourth wide, also two and a half inches long by one inch wide, down to three fourths wide by three eighths inch long, a deeply ribbed centre with outer edges slightly curved upwards.

I researched the entire Nomenclature book, also Sealy's. Finally I stumbled upon their description of "Dubia" which almost exactly matched our plants. I have taken branches of blooms to various Camellia shows and to the American Camellia Society meetings hoping that someone could solve my dilemma.

The thing that has really created interest is their continued resistance to the very severe freezes and their ability to come back and bloom profusely after temperatures as low as 4°F. In the interim, since 1980, we have lost over seven hundred Camellia plants ranging in age from three to thirty years. *Reticulatas* were hardest hit, also *saluenensis* hybrids.

In 1984 I took slides showing present height of approximately fourteen feet, with the profusion of blooms not only remaining on the plants, but carpeting the ground around them

with a solid mass of pale pink. One would look up expecting to see bare branches but instead they were completely covered with blooms. I mailed prints to people in Australia, New Zealand, Japan and France and several here in America asking their help in identification. Each reply I received was different but all agreed upon "hybrid".

Now take into account the plants we purchased fifteen years ago had to be three to four years old to be large enough for grafting stock. Consider the fact this now takes us back about twenty years and that *lutchuensis* only came to America in the early sixties. Next consider the time from pollination, seeds to germinate, sufficient time to propagate enough plants to market; this should add another five to ten years. Who in America was hybridizing species in those early days?

Long years ago I went back to the garden centre from whence they came, hoping they could throw some light on their source of supply. They said they had numerous sources and had no way to pinpoint them.

I always seem to come back to square one "Dubia or Dubious?".

Elimination of variegation viruses from contaminated Camellia apices through grafting 'in vitro' on aseptically cultivated shoots

Elimination des virus par greffage in vitro

Eliminación del virus mediante el injerto in vitro

Eliminazione dei virus mediante l'innesto in vitro

DR. JEAN CRÉZÉ
France
(*See Colour Section)

(A Brighton Congress talk)

I thought you might be interested in the results obtained by the grafting 'in vitro' of Camellias which I have been carrying out since 1980 as already mentioned to you in Kyoto and Sacramento.

I have been concentrating my experiments upon the elimination of Camellia viruses and so, out of 737 grafts performed to date, in 612 instances I took the apices from diseased plants.

From memory here is a short illustration of the technique used:

I grow sterile seeds of *Camellia japonica* in a (gelori) bed. When the shoots are well developed I cut these above the cotyledons and I graft on the stem in apex of the plant to be studied. I seal the bud with paraffin.

The new shoot thus reconstituted is put back in a sterile bed containing a solid basis of fine perlite.

The shoot grows rapidly and can be transferred to a container one or two months after the grafting.

What are the results?

I studied only the results obtained with grafts more than 2 years old since, in the conditions of the experiment, the plants which remain diseased in spite of the graft do not show the variation until a year after the graft has been performed. As far as the Camellia is concerned, we still have not found a serological reaction enabling us to establish that the plant is healthy.

Out of 612 plants grafted in 1981-1982 by the end of 1981 we are left with 331 surviving plants i.e. 54%.

Out of 331 surviving plants, 68 show variegations and 263 appear healthy, i.e. 79.4%. It must be noted that results vary considerably according to the species being grafted:

'Rose Preston':
34 grafted plants - 25 plants surviving after 2 years. 24 healthy plants - 1 diseased.

'Marjorie':
34 grafted plants - 18 plants surviving after 3 years. 17 diseased plants - 1 healthy plant.

'Marjorie' is the basis of our test as the colour is entirely diseased and there are no healthy plants.

It is a virulent contamination which results in burning lesions through contact with the sun, but the grafting produced only one healthy plant out of 18 and it is that which we use as another plant to obtain a series of others free from variegation.

To what can be attributed these different results?

To the type of virus? Yes if, as Mr Plahidas thinks, there are indeed several types of viruses.

To the sensitivity of the cultivar? I should be inclined to support that idea since the variegation virus which brings out enormous lesions as we have seen in the case of 'Marjorie', results in much more discreet ones in the case of other cultivars.

To conclude I shall make two more comments.

I have tried to improve the results through the use of thermotherapy. I kept well developed young grafted plants at 38°C during 20 days, but still in a tube. About half the shoots were destroyed by such a brutal treatment but the surviving ones showed signs of disease at a much earlier stage than in the case of the non heated ones. (Within a month instead of within a year) and the percentage of healthy plants did not increase. Such an apparently paradoxical result is well known among virologists.

Is such a technique bound to be replaced by the cultivating of Camellias in vitro? It is possible. Before retiring, Father Beauchesne cultivated two varieties of Camellias. He reached the multiplication stage but the rooting of the young plants obtained proved to be inconsistent and haphazard. It is a long and costly method which is probably practicable although I wonder if it would be an economical one for a low demand i.e. a few thousand plants of each variety of Camellia.

The graft 'in vitro' is simple, rapid, costs little and requires a minimum of equipment to produce within a month a healthy plant from a diseased Camellia.

The propagation of *Camellia japonica* L. by 'in vitro' culture

La multiplication des camélias par la culture in vitro

Propagación de la camelia mediante el cultivo in vitro

Propagazione delle camelie mediante la coltura in vitro

Dr. A. SAMARTÍN and DR. Ma. L. GONZÀLEZ
Faculty of Biology, University of Santiago, Spain

*See Colour Section

The species of the genus Camellia, like many other woody ornamental plants, have traditionally been reproduced by cuttings, stooling, grafting, etc. However in many cases, the low success rates of these methods make them inadequate for supplying today's expanding market. The possibility of applying in vitro tissue culture techniques to the propagation of Camellia was suggested by Bennet (1977) and its advantages stressed by Mantell (1982), but comparatively little research has so far been carried out in this direction, and the results have been only partially satisfactory. However, Doi (1981) has obtained whole plants from culture of anthers of *C. sinensis L.* Tian-Ling (1982) has described suitable conditions and nutrients for the growth and morphogenesis of immature cotyledons and young embryos of *C. oleifera* Abel.

The first attempts to regenerate *C. japonica* L. by in vitro tissue culture techniques seem to have been those of Beauchesne (1978), who used stem apices of the varieties 'Donckelarii', 'Wellingtonia' and 'Mother of Pearl'. These early experiments produced either the death of the explant or large masses of callus, without any differentiation of organs. Later, Crézé and Beauchesne (1980) found that the use of 10 g/l of polyvinylpyrrolidone promoted the growth of small (10 mm) shoots, and promising results were also obtained using apices of *C. saluenensis* Staf. ex Bean × *C. japonica* L. seedlings (i.e. juvenile material), but not when attempts were made to rejuvenate long-standing varieties such as 'Ville de Nantes' which are normally propagated by cuttings. When the stem apex micrograft technique developed by Murashige (1972) for *Citrus* was applied by Crézé (1983), the results were found to depend heavily on the variety involved, but the average success rate of 66.9% opens up interesting prospects for the production of virus-free plants. Finally, Bennet and Scheibert (1982) have regenerated whole plants from cellus cultures initiated from the cotyledons of *C. japonica* L. seeds, but recognize that "the need for additional refinement in media and growing conditions should lead to techniques for commercial application for tissue propagation of camellias".

The aim of the work described in the present article has been to study the application to *Camellia japonica* L. of micropropagation techniques designed for the rapid clonal multiplication of woody species (Boxus, 1978; Mott and Zimmerman, 1981; Brown and Sommer, 1982). The first phase of the investigation concerned the establishment *in vitro* of initial explants and the subculture of the buds formed *in vitro* to produce multiple shoots. In the second phase shoots obtained from the shoot multiplication cultures were induced to root so as to produce whole plants fit for transfer to soil and eventual planting out. The results of the present study will be used to orient further research on the optimal conditions required for large-scale *in vitro* propagation of *C. japonica* L.

Initial cultures

The starting material used consisted of apical buds of plantlets grown from seed in the greenhouse. Juvenile material is both more responsive to auxins and cytokinins and of faster growth than adult tissue, and is thus preferable for initial research, but the results obtained are not exclusively relevant to juvenile tissue, since they provide valuable indications of the nutrients and conditions required by adult explants.

Shoots were surface sterilized by successive treatments with 70% ethanol for 2 min and 5% calcium hypochlorite for 6 min, followed by three rinses in sterile water. Apex explants 1 cm long were placed aseptically in test tubes containing the mineral medium of Murashige and Skoog (1962):

NH_4NO_3 ..... 6 mM
KNO_3 ..... 7 mM
$CaCl_2.2H_20$ ..... 0.5 mM
KH_2PO_4 ..... 2 mM
$MgSO_4.7H_20$ ..... 1 mM

The medium also contained the microelements and Fe-EDTA prescribed by Murashige and Skoog (1962), together with (per litre) 1 mg thiamine HC1, 1 mg calcium panthotenate, 1 mg nicotinic acid, 1 mg pyridoxine-HC1, 0.01 mg biotine, 100 mg m-inositol, 2 mg ascorbic acid, 20 mg adenine sulphate, 1 mg benzylaminopurine, 1 mg kinetin, 0.1 mg indoleacetic acid, 30 g sucrose and 6 g DifcoBacto agar. The pH was brought to 5.5-5.6 before autoclaving for 15 min at 121°C. Cultures were incubated in a growth chamber with a 12h photoperiod of irradiance intensity 353uW.cm^{-2} and day and night temperatures of respectively 25° and 18°C.

Shoot multiplication

The shoot apex explants began to develop after 4 weeks' culture in the basal medium, and the axillary buds of these shoots began to grow at about the sixth week after transfer at fresh medium. It was thus possible to start subculturing to shoot multiplication cultures some 10 weeks after stablisment initial explants. Successive subcultures of the various clones were thereafter made every 8 weeks (Fig. 1*) The rapid growth of shoots cultured *in vitro* as compared with camellias' normal rate of growth outside the laboratory, together with the use of nodal sections of the shoots obtained *in vitro* for successive subcultures, ensures an abundant supply of rootable shoots throughout the year, which contrasts with the short season in which traditional multiplication by cuttings or grafts can be carried out (and is the principal reason for the popularity of micropropagation techniques for the largescale production of both herbaceous and woody plants).

Apart from the Murashige and Skoog medium described above (MS), a number of other macronutrient formulae were tested at the shoot multiplication stage: Lepoivre (Quoirin and Lepoivre, 1977), Knop (Tabachnik and Kester, 1977), the medium prescribed by Schenik and Hildebrandt (1972) and Hellers medium (1953) with 1 mM of $(NH_4)_2SO_4$ added. MS consistently gave the best results as regards both the growth and vigour of the cultures. Various concentrations of the growth regulators used by Crézé and Beauchesne (1980) were also tried, with the result that neither indoleacetic acid (IAA) nor adenine sulphate nor kinetin were found to improve either the growth or general condition of the cultures, whereas the concentration of 1 mg/1 of benzylaminopurine (BAP) did significantly improve both growth and multiplication rates (Fig. 2*). In a further trial, increasing the photoperiod to 18h failed to cause any significant difference in the growth of shoots.

The rooting of shoots regenerated in vitro

The large-scale regeneration of whole plants fit for transfer to soil requires not only high multiplication rates but also the successful rooting of the regenerated shoots. In this respect wide variations were observed among different clones, a finding analogous to that reported by English (1951) for the rooting of cuttings of different varieties of camellia.

In an initial series of root-induction experiments, 8-week-old shoots 3-4 cm in length were cultured for 11 days on a medium containing 1, 3, 5, 7 or 10 mg/l of indolebutylic acid (IBA), after which the shoots were transferred to fresh medium with no auxin for the newly formed roots to develop. This technique produced rooting rates of only 8-16%, with but 1 or 2 roots per rooted shoot. Much better results were achieved by treating the shoots regenerated *in vitro* as "minicuttings", briefly dipping their basal 2cm in concentrated auxin solution before their immediate transfer to auxin-free medium for the roots to develop. Two auxins were tried, IBA and naphthalene acetic acid (NAA), both at a concentration of 1 g/l, and each was tested using dipping times of 10, 20 and 30 min. With this kind of treatment the first roots emerged after about 18 days, 70-95% of the shoots rooting (depending on the dipping time used and the clone involved) (Fig. 3*). For both auxins the best results were given by a dipping time of 30 min. Though the two auxins did not differ significantly as regards the rooting rates achieved, IBA-induced roots were long and fibrous, with an abundance of hairs, whereas NAA-induced roots were short, thick and generally abnormal in appearance, a finding somewhat similar to that reported by Stoutmeyer (1954) for the rooting of camellia cuttings. IBA was thus the auxin chosen for *in vitro* root induction in all subsequent work, starting with series of experiments in which the optimal concentration of IBA and the optimal dipping time were found to be respectively 1 g/l and 20-40 min for all the clones used, rooting rates of 70-95% being achieved.

The optimal age of regenerated shoots for root induction was found to be 2 months, the rooting rate declining progressively in 3-, 4-, 5- and 6-month-old shoots, though the number of roots per rooted shoot was less affected. The sucrose content of the medium was also found to be important. At sucrose concentrations of 5-10 g/l rooting was poor. A threshold effect was observed at 20 g/l, at which concentration a marked improvement in rooting occurred, and the best results were obtained with 30-50 g/l (depending on the clone), above which level (at 70, 90 or 110 g/l) no increase in rooting rate compensated the progressive shortening of the roots produced and the increasing apical necrosis rate.

Keeping rooting cultures in the dark for 9, 18 or 27 days after IBA dipping treatment was found to favour the induction and growth of roots in clones which otherwise presented low rooting rates. 18 days' darkness was sufficient to speed up root emergence by 4-5 days with respect to controls exposed to 12 h light per day, and to ensure 90-100% rooting rates. In subsequent series of experiments it was shown that darkness in fact has a greater effect on these poor-rooting clones than the concentration of IBA or the choice of mineral medium.

Transfer to soil

By the eighth week after IBA dipping treatment the rooted shoots had hardened sufficiently for transfer to soil (Fig. 4*). This critical change in the plantlets' environment and nutrition was carried out in two stages. First they were transferred to peat pots containing a 1:1 mixture of peat and perlite and placed for 15 days in a greenhouse mist chamber, after which they were withdrawn from the chamber and exposed to normal greenhouse conditions (Fig. 5*). The survival rate was 90%

The application of *in vitro* tissue culture techniques to *C. japonica* L. opens up exciting prospects for the rapid propagation of plants on a large scale, and will facilitate the development of new hybrids, the production of disease-free plants and the storage and transport of stocks.

References

BEAUCHESNE, M. 1978. Riproduzione meristematica della Camellia. Notiziario della Societa Italiana de la Camellia, Cannero Riviera, anno XIV. March 1978.

BENNET, W. Y. 1977. Tissue culture for Camellias? The American Camellia Yearbook 1977 : 188-190.

BENNET, W. Y., SCHEIBERT, P. 1982. "In vitro" generation of callus and plantlets from cotyledons of *C. japonica*. Camellia Journal 37(1): 12-15.

BOXUS, Ph. 1978. Round-table conference on "in vitro" multiplication of woody species, 295 pp. CRA, Gembloux.

BROWN, C. L. y SOMMER, H.E. 1982. Vegetative propagation of dicotyledonous trees. En: Tissue Culture in Forestry. Ed. J. M. Bonga y D. J. Durzan. Marinus Nijhoff/Dr. W. Junk Publishers. The Hague, Netherlands, 109-149.

CRÉZÉ, J., 1983. Where do we stand in regard to the grafting of apex of Camellia. International Camellia Journal. 15: 56-60.

CRÉZÉ, J. y BEAUCHESNE, M. G. 1980. Camellia cultivation "in vitro". Inter. Camellia J. 12: 31-34.

DOY, I. 1981. Frequency of root differentiation in anther culture of tea. National Research Institute of Tea, 60: 1-3.

ENGLISH, L. L. 1951. Response of Camellia cuttings to rooting compounds. Amer. Cam. Yearbook: 196-203.

HELLER, R. 1953. Recherches sur la nutrition minérale des tissus végétaux cultives in vitro. Ann. Sci. Natur. Bot. Biol. veg. 14: 1-223.

MANTELL, S. H. 1982. Tissue culture techniques. En: International Camellia Journal: 61-64.

MOTT, R. L. y ZIMMERMAN, R.H. 1981. Tres: round table summary. Enviro. Exp. Bot. 21: 415-420.

MURASHIGE, T., BITTERS, W. P., RANGAN, T.S., NALLER, E. M., ROISTACHER, C. N. and HOLLYDAY, P. B., 1972. A techique of shoot apex grafting and its utilization towards recovering virus-free *Citrus* clones. Hort. Sc. 7. p: 118-119.

MURASHIGE, T. y SKOOG, F. 1962. A revised medium for rapid growth and bioassays with tobacco tissue cultures. Physiol. Plant. 15: 473-497.

QUORIN, M. y LEPOIVRE, P. 1977. Etude de milieux adaptex aux cultures in vitro de *Prunus*. Acta Horticulturae 78: 437-442.

SCHENK, R. M. y HILDEBRANT, A. C. 1972. Medium and techniques for induction and growth of monocotyledonous and dicotyledonous plant cell cultures. Can. J. Bot. 50: 199-204.

STOUTMYER, V. T. 1954. Growth regulators. Nart. Hort. MAg. 33 (1): 43-47.

TABACHNIK, L. y KESTER, D. E. 1977. Shoot cultures for almond-peach hybrid clones "in vitro". Hort. Science 12 (6): 545-547.

TIAN-LING, L. V. 1982. Regeneration of plantlets in cultures of immature cotyledons and young embryos of *Camellia oleifera*. Abel. Acta Biologiae Experimentalis Sinica. Vol. 5, no. 4.

Making a garden

Création d'un jardin

Creando un jardín

Come creare un giardino

MRS. NANCY BIRD
Quarndon Hall, Derby, England

(see colour section)

The growing of Camellias in the East Midlands by a beginner has, like most things in life, proved the adage ... "easier when you know how". So by more error than trial I have learned that to give the plants a good start one should not plant small immature Camellias outside in this part of the British Isles.

I have this spring the bodies of Camellias 'Grand Jury', 'Contessa Lavinia Maggi', 'Donation' and 'Floradora Girl'. These were planted out in 1983. Some other shrubs mysteriously died this year as well. Namely a large *Rhododendron barbatum, Hamamelis mollis* and a *Chaenomeles*. We sent them all off for examination to The Ministry of Agriculture in Derbyshire. The results are as follows and I quote ... "We have been seeing many strange effects this year that seem to have been due to a combination of the summer drought last year weakening the plants, and then the hard winter killing them off".

Lt. Col. & Mrs. Glanville, who are near neighbours and fellow members, have been a source of good advice and have managed to improve my Camellia growing considerably. I can report more success with my larger outdoor varieties which are as follows ... C. 'Apollo', 'Nancy Bird', 'Donation', 'C. M. Hovey', 'Barbara May', 'Lady Clare', 'Shin-Akebono', 'Spencer's Pink', 'Tomorrow', 'Adolphe Audusson', 'Magnoliaeflora' and 'Inspiration'. These are on average seven years old. They have all flowered well this year and added great lustre to the garden. Of the remaining slightly younger outdoor Camellias 'Scentsation', 'Alba Plena', 'Rubescens Major' and 'Are-jishi' are all growing well but have not yet flowered. 'R. L. Wheeler', 'Debutante', 'Elegans' and 'Brigadoon' were all dug up and brought into the camellia house to remain until they have a more robust appearance...

In the cold camellia house I am bringing on the following varieties purchased in 1983 from Mr. John Allen: 'Lady Vansittart', 'Bowen Bryant', 'Satan's Robe', 'Trewithen White', 'Sunset Oaks', 'Miss Charlston', 'Guilio Nuccio', 'Betty Sheffield', 'Anticipation', 'Reg Ragland', 'Bow Bells', 'Elsie Jury', 'Margaret Davis', 'Sea Foam', 'Mercury Variegated', 'Betty Sheffield Supreme', 'Silver Anniversary'. Also in the camellia house are 'Shiro-Dinkagura', 'Frau Minna Seidel', 'Tahiti', 'Beau Harp', 'Francie L'. These are all rooted cuttings from Col. Glanville's collection. 'Cornish Spring' and *Reticulata* 'Miss Tulare' came from Mr. Trehane's nursery. 'Mathotiana Rosea', 'Billie McFarland', 'Bob Hope', 'Alexander Hunter', 'Narumi-gata', 'Water Lily', 'Jury's Yellow', 'White Swan', 'Nishiki Kirin', 'St. Ewe', 'Wildfire', 'Mary Wheeler', 'Mrs D. W. Davis', 'Guest of Honor' and 'China Clay'. These have come from The Savill Gardens and our local nursery. Every year they have made good growth and flowered well. This spring they all contributed to a spectacular display. 'Jury's Yellow' is worth a special mention. It flowered for the first time this year and produced exquisite round creamy flowers on a beautiful compact bush, the flowers lasting some three weeks. *Reticulata* 'Miss Tulare' has come through the winter very well indeed, producing three lovely flowers. This particularly pleased me because the camellia house is not heated at all. This has encouraged me to attempt to build up a collection of the *Reticulatas*.

We visited Dr. James Smart's wonderful garden "Marwood Hill" this spring, which was a joy to behold. I left clutching the following cuttings very kindly given to me by Dr. Smart, *Reticulatas* 'Pharaoh', 'Royalty', 'Howard Asper', 'Butterfly Wings', 'Pink Sparkle', 'Mandalay Queen', *Camellia japonica* 'In the Pink' and *granthamiana*. I am glad to report that the majority, at this stage, are beginning to set roots. I also purchased Camellias 'Grand Slam', 'Leonard Messel', 'Sunset Glory' and 'Drama Girl'. I await their future development with much anticipation.

The progress in our garden overall is a mixture of excitement and disappointment. Some borders romping away and others not happy at all. We are finding out how greedy Yew Trees are, not only in the depletion of the soil but in obscuring light from the plants around them. So many of these have been severely topped. We saw Rhododendrons *thomsonii,* 'Unique', 'Olympic Lady', *morii,* 'Lady Chamberlain', 'Calstocker', *bauhiniiflorum, flavidum* × 'Lady Rosebery' and Yunncinn all flower for the first time this spring and all worth waiting for. Rhododendron 'Hawk Crest' and a large Camellia 'Donation' were well budded but the squirrels removed all the buds systematically over winter. They left them all lying on the ground, not attempting to eat them...

The two acre field which rises on the other side of the lake is now being prepared for planting. Some one hundred trees consisting of Oaks, Birches, Conifers, Magnolias and Sorbus were planted last autumn. The pathways are now ready, the beds marked out but not-quite ready for planting.

We decided to extend the rockery and waterfall further back into the field. An extra pond with some sixty feet of stream was added improving the general proportions. Fifty tons of Magnesium Limestone was used in the initial construction. This was obtained from a local quarry.

A secret garden is also beginning to take shape at the lower end of the old vegetable plot. Eighty Castlewellan Conifers are forming the enclosure, to make a hedge six feet high. The overall planting at the moment is also secret. We have not decided our planting scheme.

Our gardener, who is full time and has been with us since we moved here some five years ago, has the assistance of a young lady Y.T.S. student. He has furnished the following figures which might be of interest to readers. To date we have used some thirty tons of coarse bark, twenty tons pulverised bark, ten tons medium bark, twenty tons sedge peat, fifty tons of hops and fifteen tons of boxed manure. Yearly, we put in some two and a half thousand bedding plants and take some thousand cuttings per year, of which two thirds are successful. We have installed a polythene tunnel adjacent to the green house, where most of the young plants are kept.

When we purchased this old house, built in 1845, it had to its credit a beautiful garden layout of four acres with a mature one acre lawn. Beech Trees of over one hundred years old and a small natural lake, but little else of interest. We are aiming to improve the interest so that each season brings its own rewards. We have still a long way to go in the making of our garden...

The distribution of wild *Camellia japonica* in Japan and South Korea

Camellia japonica sauvage au Japon et en Corée du Sud

Camellia japonica silvestre en Japón y Corea del Sur

La Camellia japonica selvatica in Giappone e nella Corea del Sud

SHUNPEI UEMOTO and GLORIA MAY CADDELL

Laboratory of Horticultural Science, Kyushu University, Hakozaki, Higashi-ku, Fukuoka 812, Japan

** See colour section*

Concerning the origins of *Camellia japonica*, two theories have been discussed by groups of Camellia researchers. One is that *Camellia japonica* originated in south-western Japan, and another is that it originated in south-western China. To properly evaluate these theories, a large amount of data on the distribution of *C. japonica* is necessary. In this report, we discuss the progressive distribution of wild *C. japonica* in Japan and South Korea.

1. First we will discuss the distribution of natural populations of *C. japonica* in Japan and South Korea.

In Japan as shown in Fig. 1., the distribution range of wild *C. japonica* extends from the Ryukyu Islands, situated in the most southern part of Japan, through Aomori Prefecture, which is located in the northernmost part of the Honshu Island of Japan. In the south-western area, the distribution of wild type *Camellia*

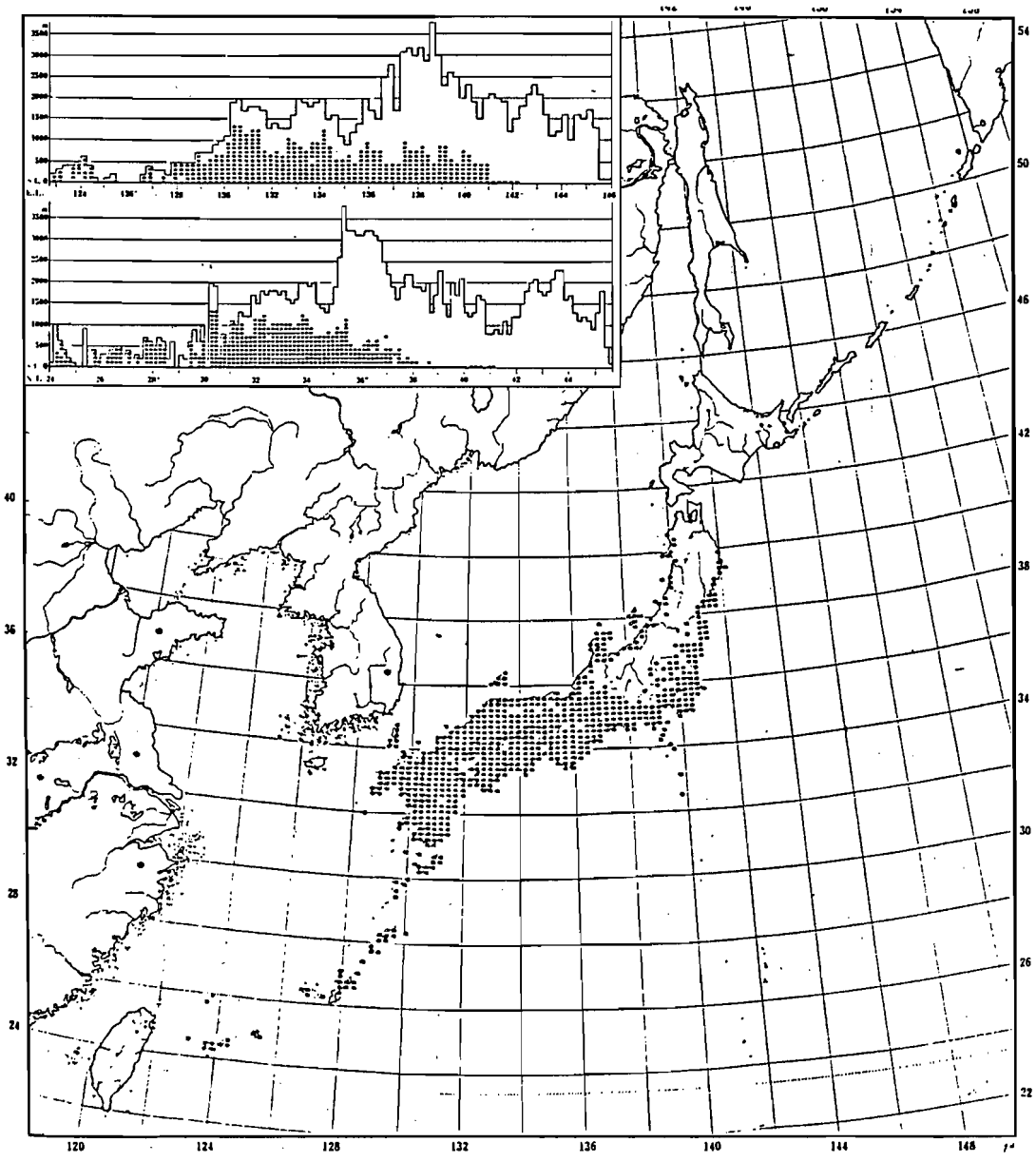


Fig. 1 The distribution of wild Camellia japonica in Japan (Horikawa 1972)

is more concentrated, populations being found throughout the evergreen broad-leaved forest up to 1,300m above sea level. However, in the north-eastern area, especially in the Tohoku district, *C. japonica* forms scattered clumps of almost pure populations in the deciduous forest, and on the sea coasts of the peninsulas. Genetic polymorphism and heterozygosity are high in most populations, and it is assumed that they were naturally established (Wendel and Parks, [in press], Caddell and Uemoto, 1984).

In South Korea, wild type *C. japonica* is distributed in the south-western area, as scattered populations on the sea coast and islands in the south-western sea, and forms pure forests as in the Tohoku district of Japan (Fig. 2).

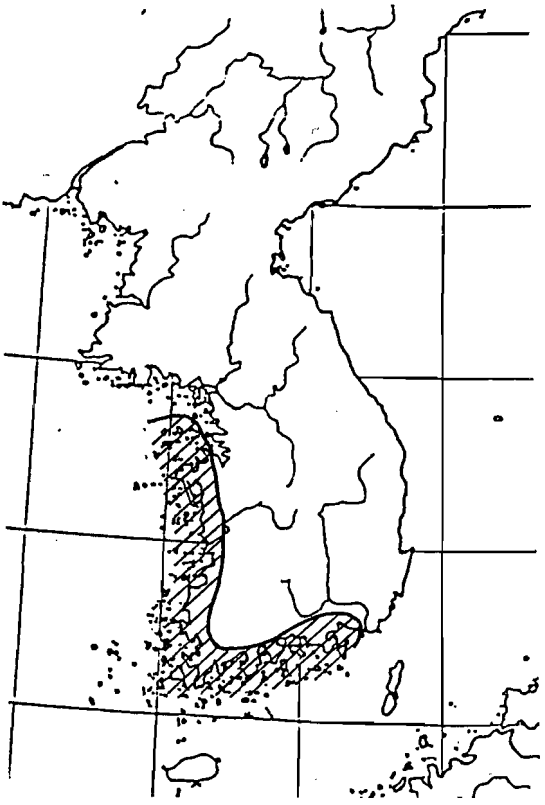


Fig. 2. The distribution of wild Camellia japonica in South Korea

2. The extension of wild type *C. japonica* to the northern area of Japan and South Korea.

Nowadays, the *C. japonica* located in the southern islands of the Ryukyus is classified as *C. japonica* var. *hozanensis*. However, there are no distinctive differences between *C. japonica* (var. *japonica*) and var. *hozanensis* except for bud dormancy phenomena. That is, it is recognised that many characteristics, such as morphological ones, flower pigmentation (Sakata *et al*, 1983), flowering practices, etc., are similar. Only the growth responses controlled by bud dormancy show distinctive differences in both varieties, *japonica* and *hozanensis*.

Camellia japonica var. *japonica* trees usually have deep dormancy in both leaf and flower buds, so they show some cold resistance in northern areas. However, *C. japonica* var. *hozanensis,* distributed in the southern Ryukyu islands, has no dormancy and shows no cold resistance, and often sprouts a shoot about three to four times per year (Uemoto *et al*).

It is assumed that *C. japonica* populations have moved gradually to more northern areas of Japan from the Ryukyus accompanying the retreat of the last glacier in the inter-glacier period. Consequently, *C. japonica* popula-

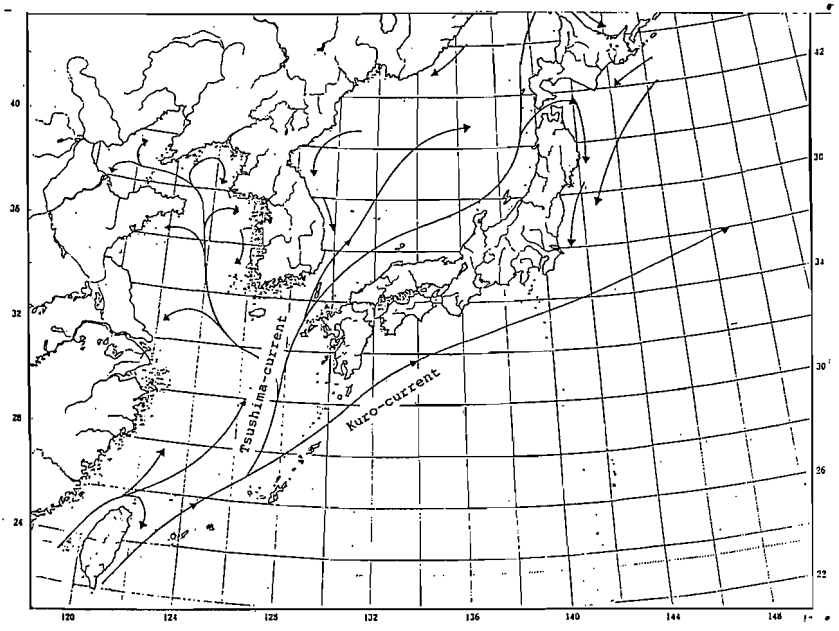


Fig. 3 The main warm currents near at Japan and South Korea.

tions have become distributed widely in Japan and South Korea, and we can enjoy wild camellia flowers for a long period, over half the year throughout Japan, from early autumn in the Ryukyus to late spring in Aomori.

3. The processes of the northward advance of wild *C. japonica* in Japan and South Korea

As shown Fig. 3, a main warm current, the Kuro-current, flows along the Pacific Sea coast to Japan, and its branch current, the Tsushima-current, flows along the Japan Sea side of Japan and the Yellow Sea side of South Korea. It is assumed that *C. japonica* capsules and seeds might have been carried up by these two warm currents. *Camellia japonica* capsules very easily absciss from the peduncle in strong wind such as in a typhoon and the capsules fall from the stalk easily. Thus, mature seed, contained within undehisced capsules from sea coast populations, may be carried northward by these currents. The present distribution of *C. japonica* in Japan and South Korea may be at least partly a result of distribution in this manner.

4. The differentiation of wild *C. japonica* in Japan

In the course of its movement into northern areas, *C. japonica* became specialized and differentiated with respect to some characteristics, such as flower colour, doubleness of flower petals, capsule and seed size, etc.

Variation in flower colour, from red through pink to white, is often found in populations located in the Ryukyus and Kyushu. We can occasionally find semi-double flowered trees in populations distributed in Kyushu and Honshu. Especially the population located in the mountain areas of Yaku island, which is situated just south of Kyushu, has large capsules and small seeds, and has been classified as var. *macrocarpa.*

Several years ago a flower of *C. japonica* with white margins* was found in a natural population on one of the Goto Islands, 'Tamano-Ura'.

A tree growing in a shrine on the Pacific coast of Iwate prefecture is supposed to be about 1200 years old and is the oldest living Camellia tree in Japan.

A Camellia garden for posterity Eryldene restored

Eryldene restaurée

Eryldene restaurada

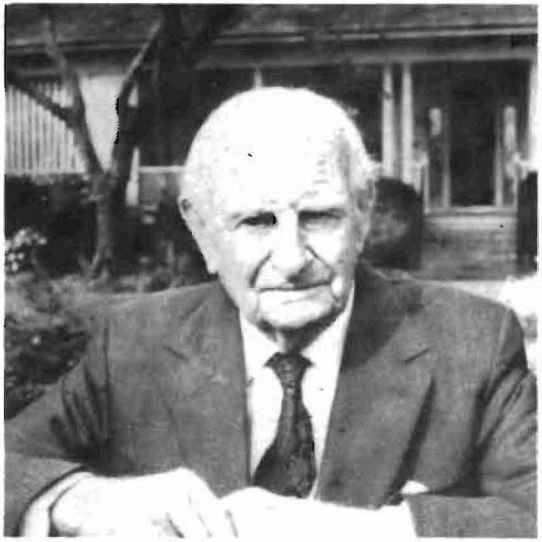
Eryldene restaurata

SIR ALEXANDER BEATTIE
Sydney, Australia

In the 1979 issue of this journal (Vol 11 page 4) under the heading "Safeguarding Eryldene for Posterity" it was reported that The Eryldene Trust had been established with the objective of acquiring the home and garden of the late Professor Eben Gowrie Waterhouse, foundation President of the International Camellia Society, and that an appeal had been launched to raise the necessary funds.

The main purpose of this further article is to let members know that the appeal was successful, that the Trust has acquired the property and contents, that the house and garden have been restored, and that the Board of Governors of the Trust is looking forward to meeting members who come to the next Congress of the I.C.S. in Sydney in September 1986.

E. G. Waterhouse married Janet Kellie at Kilmarnock in Scotland in October 1912. He brought his bride to Australia and took up duties as Senior Lecturer in modern languages at Sydney Teachers College. He commissioned architect William Hardy Wilson to build him a bungalow on a 7/8 acre block at Gordon, New South Wales, about 10 miles from Sydney on the north side of the harbour, and took possession of the finished home on Good Friday 1914. It had cost the then-considerable sum of £1,760 and was given the name of his wife's home, "Eryldene". He was to live there until his death in 1977 in his 97th year. Janet died in 1973.



E.G.W. at "Eryldene'

The garden was planned by a partnership of owner and architect. It took its final form only after a number of Hardy Wilson designed outbuildings had been completed. By 1921 Janet had produced four sons and, finding the bungalow less than perfect for academic study, E.G.W. commissioned a garden study — with bathroom! Then in 1927, following his appointment as Professor of German at the University of Sydney, he asked his architect friend, who had been studying in China, to design a tea-house for the western side of the grass tennis court, and that was built. At other times, the temple in the front garden, the pigeon house (which still houses some dozen white fantail pigeons), the moon gate in the tennis court fence, the tool shed and the garage, all architect designed, were built.

It was around these buildings that the garden was created. Near the end of his life, the professor was to say on a television programme (see "Camellia Concerto" in I.C.S. Journal Vol. 9 page 9):

"I proceeded from the start to lay out the garden in relation to the home. That has al-

Front elevation of Eryldene with Temple at left

Teahouse at "Eryldene"

ways been my idea of combining the house and the garden so that they are one together. I regard the various parts of the garden as different open air rooms in which the plants are arranged and disposed as you would arrange furniture and chairs and so on in a room. The basic pattern was to combine things into a harmonious unity, so that one thing leads to another."

Camellias were out of fashion when work began on the *Eryldene* garden and it was a little later before E.G.W. became interested in them. He said that his interest grew from his desire to add dignity and refinement to his garden. In 1914 he bought a dozen plants about one metre high, gave six of them to Hardy Wilson, and planted the rest "at strategic points around the house". Few varieties were available at nurseries but, *C. japonica* 'Fimbriata', 'Great Eastern', 'Spencer's Pink' and 'Angela Cocchi' were bought, and used for making cuttings, which he struck in coarse river sand under glass in a frame. By the time of his death, the garden contained over 700 camellia plants in the ground or in tubs. They included cultivars associated with the history of early Australian nurserymen, camellias which he raised and named, and camellias given to him by his international friends.

Camellia nomenclature 1984 published by the Southern California Camellia Society lists among Waterhouse registered cultivars *C. japonica*: 'Barbara Mary', 'Betty Cuthbert', 'Campanella', 'Corroboree', 'Carillon', 'Candy Stripe', 'Dainty Maiden', 'Henry Price', 'Jamie', 'Kurrajong', 'Merrillees', 'Moonflower', 'Polar Bear', 'Paul Jones Supreme', 'Red Moon', 'Robin', 'Roberta', and 'St. Ives'; while Waterhouse registered hybrids are 'Bowen Bryant', 'Charles Colbert', 'Clarrie Fawcett', 'Crinkles', 'E. G. Waterhouse variegated', 'Ellamine', 'Farfalla', 'Lady Gowrie', 'Margaret Waterhouse', 'Shocking Pink', 'Sayonara', 'Tatters' and 'White Lily'.

In his introduction to Mary Armati's *"E. G. Waterhouse of Eryldene"*, Sir Norman Cooper

The pigeon house at "Eryldene"

said that the professor rescued the camellia from neglect and restored it to the princedom of the garden, while, under his hands, his own house and garden became "an entrancing combination of taste, elegance and beauty".

However as the years went by, it all became more than its owner was able to cope with, as happens with so many buildings lived in by people for a long time, maintenance was reduced and, although the aesthetic standard of the ensemble never lapsed, much major upgrading and repair work was badly needed when the professor died.

But his friends and admirers quickly moved to give effect to what they knew had been his greatest wish — that *Eryldene* be preserved for posterity. The I.C.S. Executive in Sydney appointed a team to advise the Waterhouse family on the maintenance of the garden. Attempts were made to interest the National Trust of Australia in acquiring the property but these were unsuccessful. Finally a decision was made to establish a special trust for that purpose and, on 10 September, 1979, The Eryldene Trust was incorporated under the N.S.W. Companies Code as a company limited by guarantee.

The principal objects of the Trust are to acquire *Eryldene*, to maintain and promote it, and preserve the garden landscape and its atmosphere; to establish a public library, museum and art gallery; to foster the work of the Australian Camellia Research Society (A.C.R.S.) and to provide facilities at *Eryldene* for that society. The Trust has ordinary members, who pay an annual subscription of $10, and life members elected from substantial donors. There is a Board of Governors, including nominees of A.C.R.S. and of the local municipal council.

The Trust was instrumental in having *Eryldene* included in the National Estate Register of the Australian Heritage Council, and made subject to a permanent conservation order by the New South Wales Heritage Council. Aided by a grant of $80,000 from that Council, the Trust commissioned architects Clive Lucas and Partners to plan and supervise the restoration of the fabric of the house and outbuildings. The work was completed in 1983, and the Board was gratified when the Australian Institute of Architects awarded the prestigious Greenway Medal for a conservation project to the architects, who expressed the Board's view when they said: "It is hoped by this restoration that such a house can be converted to museum purposes without loss of its important identity, and that if the Professor could come back he would notice no change".

Within five years of its incorporation, the Trust has acquired from the Waterhouse family and paid for the *Eryldene* property and its contents, including furniture, pictures and objets d'art. These were valued at over $350,000-00. More than $150,000-00 had come as donations in response to appeals, and the balance resulted from the enthusiastic efforts of the Friends of Eryldene, a band of supporters who do all that is needed to be done when the house and garden are opened for public inspection: organise the function, collect gate money ($2.50 per adult), do the flowers in the house, provide security in each room, arrange the sale of morning and afternoon tea, serve in gift and garden stalls and many other tasks.

The Trust's policy is to open *Eryldene* during the season when camellias and azaleas are flowering (April to September) and also in the warmer months up to December. Openings usually include a special attraction involving a group such as the Embroiderers Guild, the Ikebana Society, the Society of Interior Decorators or the Royal Art Society. Concerts on the lawn are held in the Spring and Summer.

In 1982 the Trust commissioned a well-known horticulturalist, Mary Davis, who in the period after Professor Waterhouse's death had done valuable work as an interim curator, to prepare a conservation plan for the garden at Eryldene. Her report included plan drawings recording the plant material existing in the garden at April/May 1983, distinguishing plants in pots and in the ground and it contained recommendations concerning the policy for garden maintenance, the main tenor of which was that the garden should be kept as its owner had planned and left it. The report was approved by the Heritage Council and is being applied by a Garden Council of Trust members appointed by the Board. One of the governors, Mrs Helen Simon, editor of the A.C.R.S. publication *Camellia News*, devotes much time to propagation and other work in the garden.

The Trust has been most fortunate in having secured the services, as Custodian of Eryldene, of Mr Harry West, a former District Commissioner in Papua New Guinea. Under his supervision the property and the garden have reached a very satisfactory state of maintenance. Inquiries may bemade by telephoning him at (02) 498 2291. The address is 17 McIntosh Street, Gordon, and the mail address is P.O.Box 293, Gordon, N.S.W. 2072, Australia.

The President, Vice President, and five of The Eryldene Trust's eight Governors, are members of the International Camellia Society.

The ancient camellias of Europe

Les Camélias d'antan en Europe

Las antiguas camelias de Europa

Le antiche camelie d'Europa

T. J. SAVIGE
Wirlinga, Australia

Ancient Camellias occur with some frequency in the countries of China and Japan, the lands of their origin, some reputedly with ages up to 600 years. However, in Europe, Camellias over 150 years of age are very rare, largely due to the fact that early Camellia introductions were rarely planted in environments which would permit them to survive without care.

Nevertheless there are three cases of survival of Camellias which were planted before the year 1800. These are known as the "Caserta Camellia" near Naples, Italy; the "Campo Bello Camellias" near Oporto, Portugal and the "Pillnitz Camellia" near Potsdam, East Germany. There are no concise records of their origins or planting dates and many legends have grown up round them.

Beginning with the **"Campo Bello Camellias"**; these consist of three trees of what appears to be an identical clone of a small, simple, single red-flowering wild form *Camellia japonica* ssp. *japonica* var. *japonica*. the trunks of the two largest trees are about two metres apart and their combined spread is now in excess of 150 square metres. There were originally four plants but one died about 1924.

In 1959 Dr Frederick G. Meyer was in Portugal in charge of a plant exploration expedition in Europe by members of the New Crop Research Branch of the U.S. Dept. of Agriculture and the Longwood Gardens. In a report on the expedition which was published in[1] "Plant Explorations", October 1959 he wrote: "The old trees of the Villa Nova de Gaya in Oporto, evidence indicates, are the oldest specimens of *Camellia japonica* in cultivation, yet recorded in Europe. Old family archives of the Conde de Campo Bello, present owner of the villa, indicate that three living plants of *C. japonica* from Japan were planted in the garden about the middle of the 16th century..."

Frank Griffin, editor of the magazine "Camellian" (since defunct) contacted Mr Joaquim Moreira da Silva, a noted Portuguese nurseryman, to request confirmatory information. He then published an article[2] on the subject in the March, 1960 "Camellian" in which he states that: "Ferñao Mendes Pinto, a Portuguese navigator, was in Japan on three separate occasions, the last in August 1549 when in the company of St. Francisco Xavier. They returned to Lisbon in September 1558, to where they brought plants from Japan, including

Tsubaki, which were planted at the home of the parents of Xavier at Montemoro Velho, near Coimbra."

Although unsubstantiated, it is alleged that these Camellias must have been planted in Portugal before 1580 as, in that year, Spain invaded Portugal, after which the forebears of the Conde de Campo Bello made no further trips to Japan.

In 1962 Alfredo Moreira da Silva wrote an article on the Camellias of Oporto[3] in which he refutes the Griffin story stating: "As will be seen, my opinion on the subject is the same as that held by ancient Camellia historians, namely, that the Camellia was first introduced into England in 1739 and did not reach Portugal until 1800-1810 when it was brought by the English port wine traders." Regarding the claim that Ferñao Mendes Pinto and St. Francisco Xavier brought Camellias from Japan to Portugal he says: "St Francisco was born in his parents' castle of Xavier in Spain. He died in India in 1552. It is impossible to believe that Ferñao Mendes Pinto could have, in 1558 brought the plants to the parents of St. Francisco if they had never lived in Montemoro."

Again, in the International Camellia Journal No. 11, Oct. 1979[4], Robert Gimson, reports that the Conde de Campo Bello, in a history of his family stated: "In the archives of Campo Bello there are records of four sons of the family going to the Indies in the 16th Century, but there is no reference to them bringing back Camellias or other plants."

It is now believed that the Campo Bello Camellias were probably brought from England amongst those imported by Van Zeller, 1800-1808 and came from the Mile End Nursery, London.

The **"Pillnitz Camellia"** grows in the park of Pillnitz Castle near Dresden. It was said to be one of four plants sent to the gardens of the European Courts in the second half of the 18th Century by the Czar of Russia. It originally grew in the Orangery but was planted out in the park in 1801 where it was protected in winter by a wooden structure with windows. In 1905 this burnt down, seriously reducing the plant's size. However it survived and the structure was rebuilt. In 1950 a glasshouse of modern design with removeable window panels, replaced the old wooden structure. This is heated in winter. The plant is a *Camellia japonica* and is now about 9 metres high and 11 metres in diameter and, in season, bears large numbers of small, red, single flowers, 5-6 cm. in diameter.

Its origin, according to other unverified sources, is that it is one of four Camellia plants sent to England by Karl Peter Thunberg, following his second voyage to Japan in 1775. One of these is reported to have remained at Kew, the others delivered to the gardens of Herrenhausen in Hanover, one to Schaenbrunn in Vienna and the other to Pillnitz. However, Kew advised that they could find no evidence that Thunberg had ever sent any plants to them.

The first definite evidence of the early existence of the Pillnitz Camellia is in a report on the planting of the garden by Adolph Terscheck in 1801, when he planted out of doors a Camellia that had been already growing for some years in a tub.[6,7] Siebert's investigations (1885) from word of mouth attributed to Terscheck, indicate a date of origin 1775-1785.

The **"Caserta Camellia"** grows in the English Garden of the Caserta Park. At present it consists of four or five small trunks growing around the remains of what was once a large central trunk. It apparently was almost destroyed about 1920 but re-established from the base of the original plant. A number of plants propagated from the original exist in Caserta and Naples. The largest is in the Naples Botanic Gardens, about 6 metres high and 8 metres in diameter, while there are three specimens in Capodemonte Park.

The Abbé Berlèse[8] in his "Monographie du Genre Camellia", 1837 mentions the Caserta Camellia, said to be planted in 1760, which he states at that time to be 15 metres tall. It flowered abundantly and produced seed in large quantities. Berlèse says he obtained seed from it during a visit in 1819. In the magazine L'Illustration Horticole", vol. 33. p.76, 1886, it was reported that the Caserta Camellia was 10 metres high. It is not clear if its height had been reduced or Berlèse was a poor judge of height.

It, like the two previous Camellias, bears small, simple, single, red flowers, 5-6 cm. in diameter. Also they all form most vigorous, large, wide-spreading trees. In fact the writer was not able to discern any significant seedling variation between the Caserta Camellia and the group of Campo Bello Camellias, and, from a photo of the Pillnitz Camellia, this also seems very similar. Stories of the origin of the Caserta Camellia include one that it was a gift from Admiral Nelson to the Queen of Naples.

It is the writer's contention that all these Camellias had a common source which is as follows. If the situation regarding Camellia

plants in Europe in the middle of the 18th century is surveyed, the only source that is documented is the Petre Camellia growing at Thorndon Hall in 1737.

Lord Petre was a noted horticulturalist and a keen collector of exotic plants. He was also a Roman Catholic and a supporter of the Jesuits' missionary work in the East. The Jesuits were temporarily expelled from China about 1732, due to over zealous missionary efforts drawing the ire of the Chinese authorities. Most of them went to Macau and some returned to Europe at that time. It can be assumed that they brought plants, seeds and other curios with them. What more natural than that they gave some plant material to their patron, the noble Lord Petre, and that this included plants and seeds of Camellias. This appears the most logical origin of the Petre Camellia.

Petre's gardener[9] was Mr James Gordon, who, shortly after the death of Lord Petre, set up a Nursery at Mile End near London about 1742. He soon had a Camellia stock tree that grew for 94 years until the nursery closed in 1837. No doubt this originated from the Camellia at Thorndon Hall but whether as a cutting, sucker or seedling is not known. However Edwards illustration, made in 1745 of the Peacock Pheasant with flowers from the Petre Camellia, shows it to be an open informal double, while Gordon's Camellia was a single originally, although one of his catalogues ca. 1771-1775 lists: "63 Double Scarlet Chinese Roses". The "Botanical Magazine" of March 1788 includes an illustration of a single, deep pink Camellia flower, so it would seem that Camellias were obtainable in England at least from about 1771 onwards.

When Gordon retired in 1775, his sons brought in John Graefer as a partner, so he would have been familiar with Camellias when he left in 1786 to take up the appointment as Gardener for the Queens of Naples newly started English Garden at Caserta. This was under the supervision of Sir William Hamilton, who, in the same year, took the beautiful painter's model Emma Hant to Naples, where she soon became the second Lady Hamilton, eventually met Horatio Nelson, and entered history as his "poor Emma".

It seems an obvious thing that, with these English horticulturalists in charge of the English Garden they would ensure that the garden contained one of the very latest in plants - the Camellia.

Research by Dr Stelvio Coggiatti, horticultural author of Rome, indicates that the Caserta Camellia was planted in 1784 and came from England. As there was no other source in Europe for Camellias at the time, and due to the similarity of the three lots of Camellias, it seems logical to conclude that they were all supplied from England and probably from the Mile End Nursery.

References

1. Meyer, Dr Frederick G. "Plant Explorations", Oct., 1959.
2. Griffin, Frank, ed. "An Astonishing Revelation, Camellia History Changed", "Camellian", March 1960.
3. Da Silva, Alfredo Moreira, Historical Facts on the Camellias of Oporto", "International Camellia Journal", Vol. No. 1, Dec., 1963, p.24.
4. Gimson, Robert M. "Further ventilation on the History of the Oporto Camellia", "International Camellia Journal", No. 11, Oct. 1979, p.68.
5. Savige, Thomas J. "Journey in Portugal", "International Camellia Journal", No. 13, Oct., 1981, pp.24-27.
6. Korner, Dr Wolfgang, "Old Camellias in Germany", "International Camellia Journal", Vol. 1, No. 1, Dec. 1962, pp.48-51.
7. Kummel, Fritz, "The Oldest Camellia in the German Democratic Republic", "American Yearbook", 1981, pp. 164-175.
8. Berlèse, Abbé Lorenzo, "Monographie du Genre Camellia", 1837.
9. Tooby, John, "The Early Introduction of Camellias to England from China", "International Camellia Journal", No. 13, Oct., 1981, pp.32-36.

Sheffield Park Garden

Les jardins de Sheffield Park

Jardín del Parque de Sheffield

Il giardino di Sheffield Park

ARCHIE SKINNER
Sussex, England

see Colour Section

The history of Sheffield Park estate dates as far back as 1249, when Simon de Montfort held the manor of 'Sifelle' - Sheffield, but for the garden and plant lovers our interest really begins in the year 1769 when a man called John Baker Holroyd purchased the estate from the Lord de la Warr. Holroyd was a Member of Parliament and President of the Board of Agriculture, and was to become Earl of Sheffield. He is also well known as a friend of Edward Gibbon the historian, who wrote some of his history books in the library of Lord Sheffield's house.

In 1775 Lord Sheffield employed 'Capability' Brown to lay out a *part* of the garden. He built the third and fourth lakes, the Upper and Lower Womans Way. These two Lakes are farthest from the house and, as we see them today, are not typical 'Brown Landscape'. Better examples of his work are to be seen at Blenheim Palace or Petworth House, where wide sweeping park-land to the waters-edge is evident.

Following Brown, further work was carried out by Humphrey Repton, the very first man to use the term 'Landscape-Gardener', but sadly, little is known of what contribution he made to the garden.

The second Lord Sheffield as far as is known did little, if anything, to the garden, but the third Lord Sheffield, whose period was the late 19th century, did a great deal to improve his estate. The first and second lakes were constructed, thus joining Brown's lakes to the house. This was no mean undertaking to build two lakes, with a difference in height of twenty five feet between the two. John Pulham was the man employed to carry out this work; he is also remembered as the builder of the Rock Garden at the Royal Horticultural Society's Garden at Wisley.

In 1909 upon the death of the third Lord Sheffield, the three thousand acre estate was purchased by Mr Arthur Soames, who spent twenty five years transforming the 18th century landscape with his 20th century plantings of conifers, rhododendrons and autumn colouring subjects for which the garden is now renowned. He was a dedicated plantsman to whom we all owe a great debt.

Mr Granville Soames carried the garden through the war years, and did much restoration after the war ended, until 1954, when the estate was broken up and sold.

The National Trust acquired the garden at this time, but had insufficient funds to buy the house which, to this day is still in private ownership.

During the period from 1909 there have been three Head Gardeners: Mr T. H. Setford, who retired in 1955, his successor was Mr F. Dench who died in 1971 and I was appointed in September 1971.

Sadly, Sheffield Park Garden cannot boast a large and varied collection of Camellias.

A number of sizeable old plants are to be seen, no doubt planted by Mr Arthur Soames in the early 1900's, some of which are now 9-10 ft high and as wide. They do make a contribution to the garden scene and even when not in-flower, the healthy looking foliage is much admired. Old varieties such as 'Donckelarii', 'Blackburniana', 'Latifolia' and 'Lady Clare' are represented.

The lack of Camellias has, to some extent been rectified in recent years by the planting of quite a number in the new 'Queen's Walk' area which has been developed since 1977. Here on a rather steep slope facing north west they are proving amenable, responding to care in planting and regular mulching with well rotted compost, showing that further planting would be worthwhile.

With this in mind we are slowly acquiring more. We are also, with our very modest facilities, beginning to propagate in cold frames, a rather slow process.

A list of Camellias planted since 1977 is as follows:

'C. M. Hovey' 'Contessa Lavinia Maggi'

'Leonard Messel'	'Donation'	'Nobilissima'	'C. *cuspidata*
'Kouron Jura'	'Elsie Jury'	'R. L. Wheeler'	'Adolphe Audusson'
'Apollo'	'Tomorrow'	'Edwina Folk'	'Magnoliiflora'
'Guilio Nuccio'	'Jubilation'	'Dobrei'	
'Admiral Nimitz'	'Debutante'	'Wildfire'	
'C. M. Wilson'	'Inspiration'	'Mary Christian'	

International Camellia Society Trials in UK: Report No. 1 as at December 1984

Essais de la Société des Caméllias au Royaume Uni

Ensayos de la Sociedad de la Camelia en el R.U.

Concorsi dell'Associazione della Camelia in Gran Bretagna

A. E. F. LANE
Leeds, England

Pleas are still made from time to time in horticultural journals for a more comprehensive classification of camellias. The ICS UK trials offer an opportunity for further analysis, and they are now thought to have produced sufficient evidence of performance for a start to be made on the task. An annual audit of progress could follow, derived from the helpful records being kept at the four trial centres.

In the past some authors have attempted to rate hardiness, appearance or flowering quality, while others have chosen a system of stars to indicate the extent of their recommendation of individual varieties. The accompanying table concentrates on the flowering ability of the plants - probably their most prized quality - and shows how the 124 varieties in the trial were performing in terms of number of buds. The following rating system was adopted:

0	No Buds	NR "No Report"
1	1-10 Buds	either because a plant
2	11-50 Buds	was not supplied for
3	Over 50 Buds	trial, or has since died.

An attempt has also been made to give each variety an overall rating taking into account the results for individual plants at the four centres. As yet the evidence is inadequate for firm conclusions to be drawn for many of the varieties on trial. For example, the effect of the severity of the 81/82 winter still inhibits comparisons, even at individual trial centres, since the original plants that survived are several years older than their 1983 replacements and, again, some survivors were more seriously retarded than others. Indeed it has to be accepted that trial conditions - site, aspect and soil - cannot be identical at any two of the centres. But sufficient recordings now exist to make a start with a flowering rating. Certainly this should become more accurate with continuing observation and perhaps, in due course, ratings showing hardiness and the appeal of foliage and form of growth may be added. An overall recommendation - for various UK localities - may also be possible in time.

The best results so far are from the following three varieties which have a category 3 *average:* 'Bow Bells' (*saluenensis* hybrid), 'Cornish Spring' (*cuspidata* hybrid) and 'Inspiration' (*reticulata* hybrid). Of those with a category 2 average the following seem to be prominent: 'Dainty Dale', 'Donation', 'Lady Vansittart', 'Leonard Messel', 'George Blandford', 'Mary Christian', 'Mary Larcom' and '1820'.

The following table shows the performance by category at the four centres. It seems that in 1985 the best show of flowers will certainly be at Belfast!

Categories	0	1	2	3	Total
Edinburgh	22	28	32	8	90
Harlow Car	41	8	18	-	67
Willoughbridge	45	18	22	6	91
Belfast	14	18	34	16	82
Total	122	72	106	30	330

The varieties doing best at each of the centres are:

Belfast: 'Charles Michael', 'Sayonara', 'Dr Louis Polizzi', 'Lady Vansittart', 'Brigadoon', 'Alba Simplex' × 'J. C. Williams', 'Daintiness', 'Inspiration', 'Charity', '1820', 'Cornish Spring'.

INTERNATIONAL CAMELLIA SOCIETY TRIALS IN UK: AS AT DECEMBER 1984

Legend: NR = No report; 0 = No buds; 1 = Up to 10 buds; 2 = 11-50 buds; 3 = Over 50 buds

Name	*Belfast*	*Edinburgh*	*Harlow Car*	*Willoughbridge*	*Average*
'Elizabeth Anderson'	NR	NR	NR	NR	-
'Janie Anderson'	NR	2	NR	NR	2
'Judith Anderson'	NR	NR	NR	1	1
'Kate Anderson'	NR	NR	NR	NR	-
'Mollie Anderson'	NR	NR	NR	NR	-
'Rosie Anderson'	2	0	NR	0	1
'LHH 3C'	2	2	NR	NR	2
'Dainty Dale'	2	3	2	2	2
'E T R Carlyon'	2	1	0	0	1
'Tristrem Carlyon'	NR	2	NR	0	1
'Emperor of Russia'	NR	NR	NR	0	0
'Eximea'	0	NR	NR	1	1
'Mme V de Bisschop'	2	2	0	0	1
'Margaret Rose'	NR	1	NR	2	2
'Pink Perfection'	1	2	0	0	1
'R. L. Wheeler'	1	NR	0	3	1
'Sunset Glory'	NR	NR	NR	1	1
'Tricolor'	1	2	0	1	1
'Yours Truly'	1	1	0	0	1
'Karenza'	2	1	NR	2	2
'St Ewe'	1	2	0	2	1
'Alba Simplex' × J C Williams	3	NR	0	0	1
Williamsii xx	NR	NR	NR	2	2
'Bow Bells'	2	3	NR	NR	3
'Althaeiflora'	NR	NR	NR	NR	-
'Anemoniflora'	2	2	NR	1	2
'Comte de Gomer'	2	NR	0	NR	1
'Guidita Rosare'	NR	2	NR	0	1
'Kenny'	NR	NR	NR	NR	-
'Lady Clare'	2	0	0	2	1
'Lady Vansittart'	3	1	2	1	2
'Ludgvan Red'	2	2	NR	1	2
'Margherita Coleoni'	NR	NR	Nr	NR	-
'Peach Blossom'	NR	NR	NR	NR	-
'Thelma Dale'	2	0	0	NR	1
'Donation'	NR	1	2	3	2
'Leonard Messel'	2	1	2	2	2
'Maud Messel'	NR	NR	NR	0	0
'Adolphe Audusson'	0	0	NR	0	0
'Alba Simplex'	0	NR	NR	0	0
'Apollo'	2	0	NR	0	1
'Arejishi'	1	NR	NR	2	2
'Baronne Leguay'	NR	NR	NR	2	2
'Beaute de Nantes'	NR	2	NR	NR	2
'Berenice Boddy'	0	0	0	0	0
'Betty Sheffield'	1	0	NR	0	0
'Duchess of York'	2	0	0	0	1
'Elegans'	NR	0	NR	NR	0
'Guilio Nuccio'	2	1	NR	0	1
'Joseph Pfingstl'	NR	NR	NR	NR	-
'Jupiter'	NR	0	0	0	0
'Magnoliiflora'	1	2	0	NR	1
'Mathotiana Alba'	NR	NR	NR	NR	-
'Mathotiana Rosea'	NR	NR	NR	NR	-
'Mercury'	NR	NR	NR	0	0
'Nagasaki'	1	NR	NR	0	1
'Rubescens Major'	0	0	0	0	0
'Victor Emmanuel'	NR	NR	NR	NR	-
'Anticipation'	2	0	2	0	1
'Blue Danube'	3	NR	NR	0	2

Name	Belfast	Edinburgh	Harlow Car	Willoughbridge	Average
'Brigadoon'	3	NR	2	1	2
'Charity'	3	0	0	0	1
'Charles Colbert'	2	1	0	0	1
'Charles Michael'	3	0	0	3	2
'Christmas Daffodil'	0	0	NR	0	0
'Citation'	NR	2	NR	NR	2
'Cornish Snow'	NR	1	0	1	1
'Cornish Spring'	3	2	NR	3	3
'Daintiness'	3	1	0	1	1
'Debbie'	NR	1	0	0	0
'E G Waterhouse'	0	1	1	2	1
'Elegant Beauty'	1	1	1	1	1
'Ellamine'	2	0	2	1	1
'Elsie Jury'	2	1	1	0	1
'Freedom Bell'	2	1	2	NR	2
'Galaxie'	1	2	2	0	1
'Garden Glory'	1	2	0	0	1
'Gay Time'	0	0	1	2	1
'George Blandford'	2	3	1	3	2
'Glenn's Orbit'	1	1	0	2	1
'J C Williams'	2	0	2	2	2
'Joan Trehane'	3	1	0	2	2
'Julia Hamiter'	0	1	NR	2	1
'Little Lavender'	0	0	NR	0	0
'Mary Christian'	NR	3	2	2	2
'Mary Larcom'	3	3	2	1	2
'Phillipa Forwood'	NR	2	2	NR	2
'China Clay'	2	NR	NR	0	1
'Rose Parade'	2	2	1	2	2
'Rosemary Williams'	1	2	0	NR	1
'Sayonara'	3	3	1	0	2
'Spring Festival'	2	2	0	NR	1
'Tiptoe'	2	1	2	2	2
'Water Lily'	NR	3	2	1	2
'Wilbur Foss'	0	2	NR	0	1
'1005'	3	0	0	0	1
'1820'	3	1	2	3	2
'Inspiration'	3	3	2	2	3
'Blaze of Glory'	0	1	0	2	1
'Bob's Tinsie'	0	2	NR	0	1
'C M Hovey'	3	2	0	2	2
'Cecile Brunazzi'	2	2	0	NR	1
'Charlotte Rothschild'	2	2	0	0	1
'Contessa Lavinia Maggi'	NR	1	0	0	0
'Drama Girl'	NR	NR	NR	0	0
'Grand Slam'	1	1	0	0	1
'Janet Waterhouse'	2	2	0	0	1
'Lucy Hester'	1	0	0	NR	0
'Mattie Cole'	2	1	NR	0	1
'T C Cole'	2	2	0	0	1
'Tinker Bell'	1	2	0	NR	1
'Clarise Carleton'	2	2	2	1	2
'Arbutus Gum'	NR	NR	NR	1	1
'Arch of Triumph'	NR	1	NR	1	1
'Black Lace'	0	NR	0	NR	0
'Dr Louis Polizzi'	3	2	0	2	2
'Francie L'	1	2	0	0	1
'Grand Jury'	NR	2	NR	NR	2
'Innovation'	2	1	1	0	1
'K O Hester'	NR	NR	NR	NR	-
'Royalty'	NR	NR	NR	NR	-
'Valentine Day'	NR	0	NR	NR	0
'William Hertrich'	NR	1	NR	1	1

Edinburgh: 'Dainty Dale', 'Bow Bells', 'George Blandford', 'Mary Christian', 'Mary Larcom', 'Sayonara', 'Water Lily', 'Inspiration', 'St Ewe', 'Guidita Rosare', 'Cornish Spring', 'Grand Jury'.

Harlow Car: 'Dainty Dale', 'Lady Vansittart', 'Donation', 'Leonard Messel', 'Anticipation', 'Brigadoon', 'Ellamine', 'Freedom Bell', 'Galaxie', 'J. C. Williams', 'Mary Christian', 'Mary Larcom'.

Willoughby: 'Donation', 'Charles Michael', 'George Blandford', '1820', 'R. L. Wheeler', 'Cornish Spring', 'C. M. Hovey', 'Lady Clare', 'Glenn's Orbit', 'Tiptoe', 'Baronne Leguay', 'St Ewe', 'Mary Christian'.

I should like to place on record my indebtedness and thanks to Mr Wallace at Belfast, Mr Robertson at Edinburgh and Mr Oppenheimer at Willoughbridge for their help with this report.

A home for the Camellia Collection Mount Edgcumbe, Cornwall, England

Un site idéal pour la Collection de Camélias — Mount Edgcumbe, Cornouailles

Un hogar para la colección de camelias — Mount Edgcumbe, Cornualles

Una dimora per la Collezione delle Camelie — Mount Edgcumbe, in Cornovaglia

DON WATERHOUSE

The International Camellia Society decided that the founding of a reference collection of camellias would be both a useful and an interesting asset but the size of such a collection made finding a venue large enough to hold it a seemingly impossible task. The specification for any suitable site had to include not only sufficient area to house a collection of several thousand large growing shrubs, but also be satisfactory with respect to climatic conditions and to soil type. The "discovery" of Mount Edgcumbe Park in Cornwall appears to be the answer to the Society's prayers. Mount Edgcumbe has been the home of the Earls of Mount Edgcumbe since the seventeenth century and the gardens suggest from their design that they were developed in the eighteenth.

Research into the history of the Park is not yet completed but there are indications that its gardens were not designed by any one of the well known designers to the stereotyped layouts of most other major houses. The English, French and Italian gardens were probably creations of a former Countess, Sophia. The superb layout takes full advantage of magnificent seascape vistas. They already hold the Historic Building Society's Garden Committee Grade 1 status. Research by the Garden History Society will probably reveal many valuable pointers to what the original concept was and give guides to future restoration work.

The gardens were well managed for many years by a succession of interested earls but, with the advent of the second world war they were plunged into years of neglect. To add to this problem the then Earl was killed in action and later the U.S. Army used the Park as a tank park in readiness for the D-Day landings. From the end of the war until the Plymouth City and Cornwall County Councils bought it in 1971 very little gardening was done and sheep rambled freely everywhere.

After the takeover in 1971 exploratory work began and was followed by very basic restoration, much of which consisted of clearing a massive overgrowth. Large areas of ash, sycamore, laurel and *Rhododendron ponticum* were removed. Gradually the gardens which formerly existed became identifiable.

It soon became apparent that the original layout of the park included several widely dispersed gardens separated by tracts of open grassland with small copses of pine and beech. The steeper slopes were wooded. Old maps indicate all of these features together with a deer park. The only evidence of the deer park is the presence of a fairly large herd of fallow deer.

Mount Edgcumbe House stands well within the boundaries of the park surrounded by a stout fence enclosing seven acres of garden. This garden appears to have been set out on informal lines, except where it immediately adjoins the house, with curved pathways wending their ways through tree and shrub plantings. It has been maintained regularly but not to a very high standard and is in need of restoration.

Once restored, it would make a good place for the display of selected camellias. A few old cultivars, as yet unnamed, look very healthy after growing there for many years.

A second area comprises a group of small gardens, known collectively as the formal gardens. Three gardens constructed in English, French and Italian styles, form the bulk of the area. They had all been completely neglected for over thirty years and had to be pulled back to something resembling their earlier forms. Each garden has its own particular building all of which have been restored. Two of these, an orangery in the Italian garden and the French garden conservatory, should prove ideal for over-wintering tender plants in tubs. The formal gardens are bordered on their north and east by the sea and on the others by thinly planted woodland that gives both wind protection and light shade. The sea gives the garden a very mild climate with frost considered as an exception rather than the rule. In addition, the cold north and east winds are obstructed by tall, dense hedges of *Quercus ilex* and *Laurus nobilis*.

The third garden is in a steep sided, east-facing valley called the Amphitheatre. Its east end opens up onto the Plymouth Sound. Having been completely neglected since before the war, it had become a dense jungle of both choice and unwanted plants. The vegetation was dominated by ash and sycamore. When these were cleared a system of pathways cut into the sides of the valley was revealed. The bottom of the valley has been cleared and now contains only a narrow watercourse running through mown grassland to a pool. The steep sides are covered with tall trees that give light shade now that the saplings have gone. Traces of the former planting still remain with examples of *Rhododendron arboreum, Leycesteria formosa, Actinidia* and other species. The branches of trees growing near the bottom of the banks afford these plants a degree of protection from easterly winds and because of this, and the adjacent warm mass of sea, the Amphitheatre is another very mild location.

Evidence of former gardens on land sloping down to the English Channel has been found. One of these gardens was a complex system of pathways and terraces upon which camellias, acacias, dicksonias and many tender plants were successfully grown. Apart from clearing some of the pathways to improve access, no effort has yet been made towards restoration of this garden so it remains overgrown by forest trees and *Rhododendron ponticum*. Another garden formed a collection of large growing *Rhododendron* hybrids. The remnants of this collection exist as aged, straggly plants that are probably beyond saving.

The open grassland linking the different gardens was starved but is now improving following improved husbandry after many years of maintenance by a system of sheep grazing and neglect. As well as the sheep grazing the whole park was grazed by descendants of the former inhabitants of the deer park. The deer are looked upon as a mixed blessing because visitors to the park want to see them but the gardeners don't want them damaging their plants. Now that a new deer fence has been constructed these problems are excluded from the reclaimed garden areas. Some replanting of the copses has been undertaken.

Soil conditions

The soil throughout the estate, with the exception of part of the formal garden, is of an acid nature with a fairly high clay content. It is formed on a sub-stratum of clay and slate typical of a large part of the district. Many years of neglect have allowed a deep layer of leaf mould to develop and this has produced what appears to be an excellent medium for growing camellias. Indicators, in the form of long established calcifuges, confirm this by their apparent good health.

The exception is part of the formal gardens through which there is a narrow belt of very hard limestone. Even here the insoluble nature of this rock is such that only mild chlorosis is evident.

The start of the collection

Representatives of the International Camellia Society thoroughly inspected the estate and considered the formal gardens, amphitheatre and gardens of the main house to be well suited to requirements of the camellia genus. A resolution that the Reference Collection should be kept at Mount Edgcumbe Park was confirmed and the Joint Committee of the two councils which owned the estate was asked if it could be planted there. The idea was readily approved.

An initial planting ceremony was arranged in 1976 to coincide with the visit to the estate in that year of the International Camellia Society conference. This planting consisted of *williamsii* hybrids and one 'Gloire de Nantes'.

The ceremonial planting was followed by a number of trial plantings, mostly in the amphitheatre, in positions where the suitability of the various parts of the garden for growing

camellias could be tested. These trial plantings varied from sea level to about a hundred feet above it, and in open positions through to heavy shade. Some were placed where the wintry east winds would hit them.

In 1981 the National Council for the Conservation of Plants and Gardens agreed to support the Reference Collection of Camellias at Mount Edgcumbe by formally adding it to its list of collections.

Planning the collection

The progress of the initial plantings was monitored. All the plants survived except for two or three of *Camellia* 'Donation' that had been placed in grass. These had their trunks gnawed by mice. A group of *C. japonica* 'Elegans' forms were planted in the formal gardens on the limestone outcrop and show symptoms of chlorosis.

With the knowledge that the gardens are suitable for the family, planning started. The collection has to be developed within certain strict definitions set by the requirements of both the ICS and the NCCPG. It must also be set out in such a way that the estate's Grade 1 classification is not endangered. The committee running the collection is well aware of these conditions and the views of the estate held by its many visitors.

The ICS requires that its collection holds all camellias of interest to the British enthusiast. It must contain each of the following elements:

a) *Species.* Some species are fully hardy in the British Isles, some will survive most winters and others need a form of protection. It is intended that this group should be kept in containers so that they can be over-wintered in either the Orangery or French garden conservatory. During the summer months they will stand out in the open.

b) *Camellias of British origin.* This section may contain up to one hundred of the very old cultivars some of which will only be of interest because of their age. Many of the plants in this section may be very difficult to find and identify.

c) *Camellias of historic interest.* Included in this section will be very old cultivars regardless of their origins and those grown in British gardens since the first camellia was introduced in the eighteenth century. Problems of discovery and identification will be similar to those of the previous section.

d) *Newer cultivars.* There is a vast number of camellias of more recent origin. Some have already been tried in Britain and either proved themselves or been rejected. The successful ones can be included in the collection, the more recent ones though will have to be tried out first. New registrations are running at about two hundred a year at the present time. A trial ground, either at Mount Edgcumbe or elsewhere, will have to be created to test the suitability of these new cultivars before they are recommended for the collection and, by the same token, for gardens generally. It may be that a commercial grower or several of them may have to operate such an area.

Arrangement has not been determined. Clearly, several distinct groups exist, each with its own particular requirements. Some require more sun, others are less hardy and in the case of the *C. japonica* cultivars, there are so many of them that it will be necessary to split them artificially by colour, form or both. The principal groups will be species, *japonica* cultivars, *williamsii* and closely related hybrids and *reticulata* hybrids.

These proposals will probably be acceptable to the NCCPG.

Some of the older cultivars and many of the new ones will have to be rejected because, although the park will be able to hold a very large number of plants, not all of them are of special merit and others are unsuited to our climate. It must also be remembered that, in cases where parent plants are scarce, reserves may have to be kept, using up valuable space.

Much thought has been given to siting the collection. This has to be done in such a way that it displays each plant to maximum advantage without dominating what is already a park with an important historic character of its own. It must also be remembered that the park is used all the year round so allowance must be made for display at all seasons. The special features will have to be avoided. Even with all these restrictions large areas remain available, for camellia planting. In the Amphitheatre, where most of the planting will be done, it has been noticed that a very high proportion of the visitors to the valley keeps to the bottom third. Only a few venture to the higher pathways and most of these are walkers intending to reach more distant places. This leaves the top part, referred to earlier as one of the mildest places in the estate, for camellias and support planting. Solid planting of very large groups will have to be avoided if the effect on the valley is not to be one of massed dark green foliage for many months of the year. This would be unacceptable to both the Joint Committee and regular users of the park.

Camellias at not less than eight feet apart in small groups, with support or contrast plants between them appears to be the requirement. Examples of suitable companions for the collection, taken from a long list, include low growers like *Sarcococca, Hosta* and ferns; taller growers, *Mahonia, Fothergilla, Embothrium* and *Eucryphia*; and a canopy of *Magnolia, Stewartia,* and *Acer.*

The main summer, autumn and winter displays will not be arranged within the camellia areas but concentrated in nearby places.

To a lesser extent the formal gardens and possibly at some future date, the garden of the main house, once it has been restored, will be used to hold small sections of the collection but, in these parts the special characters of individual gardens will dictate their use.

So far the collection has developed slowly. The original plants represent all that have been placed in the park. These consist of eighty five Australian and New Zealand *japonica* cultivars and a small number of representatives of the Elegans group and some *williamsii* hybrids. Further introductions have been delayed because it was necessary to see how the originals survived and there remained the problem of the grazing habits of descendants of inhabitants of the former deer park which had access to all but the formal gardens. Now that a new deer fence has been constructed, the building of the collection can begin in earnest.

Progress has been made during the waiting time. A number of older cultivars have been obtained from gardens such as Trewithen, Wisley and Windsor; and promises of support have been received from several National Trust and other gardens. The more recent acquisitions have been raised in the Plymouth City Council's nursery where they will remain until the final planting plan has been completed. The acquisition of newer introductions is being examined at the present time and the first arrivals are anticipated late in 1983.

It will of course be some time before the collection becomes a mature display, but it is hoped that it will be worth a visit within a comparatively short period. Its value as a representative collection should be achieved very quickly. Its completion is, however, another matter! Many of the older cultivars, especially those of British origin and the earliest introductions may only exist as isolated plants, probably unlabelled, in private gardens where they will be extremely difficult to find let alone identify. Hopefully, their owners will realise what they are, or might be, and offer propagating material to the collection. Identification will be left to persons with specialist knowledge of the old varieties.

If it is to be the Reference Collection it will be essential that a proper system of cataloguing and labelling is practised. Several difficulties have to be overcome before such a system can operate. Firstly, the older, unlabelled cultivars must be correctly identified; then the many synonyms will need to be sorted out and cross referenced, and a way of introducing worthwhile new registrations incorporated. The next essential will be a practical method of locating any given cultivar from the information in the catalogue. This apparently simple exercise is complicated by that mysterious obsession some people have for moving labels or taking them home. It is optimistically felt that these difficulties can be removed.

Once the Collection is under way the catalogue of its contents will be kept up to date and available to anyone who thinks that he is in a position to provide missing links or who might just want to visit and enjoy seeing a large display of this beautiful genus of plant.

Reprinted, with the kind consent of the Editor, from the Royal Horticultural Society's year book, 'Rhododendrons 1983/84 with Magnolias & Camellias'.

Some historical notes on Mount Edgcumbe

Quelques détails historiques sur Mount Edgcumbe

Algunas notas históricas sobre Mount Edgcumbe

Alcune note storiche su Mount Edgcumbe

DAVID TREHANE
Probus, England

The history of the family, house, and gardens at Mt Edgcumbe has some international aspects which may interest readers of Don Waterhouse's article.

The family has always had strong ties with the land on both sides of the river Tamar which separates Devon, its county of origin, from Cornwall, and particularly with Cotehele, an ancient house twelve miles upstream from Plymouth Sound. Hilaria de Cotehele married William Edgcumbe in 1353, bringing to him wealth and a great estate.

William's great-grandson, Richard, declared against King Richard III and was besieged at Cotehele by the local tyrant, Sir Henry Trenowth of Bodrugan. Richard slit the sentry's throat and hid in undergrowth by the river until his pursuers were close upon him when he threw a heavy stone into the river followed by his cap which floated down among the ripples leading his pursuers to believe he had drowned. He escaped to Brittany whence he returned and gained his revenge on Sir Henry Trenowth, chasing him into the sea at a place still known as Bodrugan's Leap. In 1489 Richard Edgcumbe died fighting for Anne of Brittany at Morlaix, a town now twinned with the city of Truro, the capital of Cornwall. His son, Piers, enclosed the deer-park at Mt. Edgcumbe in 1539 and Piers' son Richard built the house in 1553. Its international role began the following year when Richard and his wife Mary Coteele entertained the admirals of the combined fleet of 160 ships of England, Spain, and Flanders accompanying Philip of Spain to his marriage with Queen Mary.

Thirty years later the commander of the Spanish Armada, the Duke of Medina Sidonia, announced that Mt Edgcumbe would be his home when England was conquered. Sir Francis Drake, who lived upstream at Buckland Abbey, facing Cotehele across the Tamar, thought otherwise!

Mary Coteele Edgcumbe provides a curious link with Holland. Her father, Sir Thomas Coteele (in no way related to Hilaria's family), was a wealthy Dutch merchant who fled to England from the Spanish Inquisition, lent money to King James I, by whom he was knighted, but liked living at Cotehele and married his daughter to Sir Richard after his first wife had died. Today Cotehele, cared for by the National Trust, contains much original furniture, armour, weapons, two Bronze Age brass horns from an Irish bog, and a Saxon horn.

When Charles II visited Mt Edgcumbe in 1671 and 1677 the park and gardens were noted for their formal avenues of trees.

In 1742 Richard Edgcumbe was made a Baron, some said because he was the only man at court shorter than the king, George III! He moved the ferry from Barn Pool below the Amphitheatre to its present site at Cremyll, so ensuring the privacy of the garden, later to be shattered by American tanks moving down to embark for Normandy.

There is a story concerning, I think, Richard's wife, Matilda. She was pronounced dead and placed in the family vault. According to the historian, Polwhele, the sexton noticed the rings still on her finger and returned at night with a lantern to remove them but could not do so easily. He bent and squeezed the finger whereupon her ladyship came back to life. The sexton fled, she picked up the lantern and walked up to the house, where she lived for many years after.

The next Baron, also Richard, brought the orange trees to the Italian Garden. He did not marry and the title passed to his brother George, an admiral of the fleet who had fought at Quiberon Bay. He had the unpleasant task of removing all the trees on the estate, in case they provided cover for an expected Franco-Spanish invasion.

There was more than one dividend from this destruction. The admiral's loyalty was rewarded by a Viscounty when George III and Queen Charlotte visited Mount Edgcumbe two years later. They so enjoyed their stay that they came again in 1789, and made the admiral

an Earl in gratitude for his hospitality and the organisation of the royal tour of the southwest! The greater dividend was the creation of the gardens, including much that remains today in spite of the Great Blizzard of March 1891, which buried Cornwall under twelve feet of snow and blew down most of the trees.

Richard, the second earl, had artistic talent and his wife Sophia possessed great natural skills, not least in garden design, commemorated on a stone memorial urn which stands in the French garden which she created. They recreated the lower garden, with its orangery, as an Italian Garden with a marble fountain and an elaborate stairway surmounted by three statues.

The characteristic of the garden and its buildings is, perhaps, the native homeliness of the design, proportions, and planting, which lack the expansive formality of the great landscapes of the professional designers of the day. This and the legendary hospitality of the owners was enough to bring to Mt Edgcumbe the Grand Duke Michael of Russia in 1818, the future king, William IV and his consort Adelaide in 1827, Queen Victoria in 1843, Emperor Frederick of Germany in 1871; Emperor Napoleon III of France the same year (one assumes they did not meet!) and, later, Empress Elizabeth of Austria and the King of Sweden.

One of the responses to the threat of a Franco-Spanish invasion was the installation of a battery in the sea wall at the bottom of the garden, which enabled the gunners to fire a 21-gun salute, an occurrence which must have stirred memories of bygone wars in Plymouth the other side of the water. Mt Edgcumbe was for the King in the Civil War and Plymouth for Cromwell.

Coming closer to the present day, the direct heir was killed at Dunkirk in 1940 and the following year the house was burnt by German incendiary bombs and stood, devastated, until it was partly rebuilt by the sixth earl who died seven years later in 1965 leaving a cousin, Edward Piers, to come from New Zealand to unravel the tangle of death duties, which he did by selling the estate to Cornwall County Council and Plymouth City Council to become a Country Park for all to enjoy. He died in 1982, his wife a little earlier. She is commemorated by the title of the Mount Edgcumbe Cancer Hospice at St. Austell in which she took a leading interest. The camellia which she planted when the I.C.S. visited the garden in 1976 was 'Inspiration', appropriately enough for the planting was her idea.

The link with New Zealand was forged anew when the present, the 8th, Earl, left his sheep farm in New Zealand a year or so ago to reside at Mt Edgcumbe with his wife and five daughters. The authorities have done their best to make him feel at home for he looks out on a flock of 500 to 700 sheep grazing in the park! At least one of his daughters is a gardener. The camellias nearest to the house are those from New Zealand and Australia. Long may they enjoy their presence and the wider planting of the National Collection.

A note on the Reginald Cory Memorial Cup

La Compe Commémorative "Reginald Cory"

La Copa Conmemorativa "Reginald Cory"

La Coppa cmmemorativa "Reginald Cory"

MAJOR E. W. M. MAGOR
Cornwall, England *See Colour Section*

The Reginald Cory Memorial Cup, which is won outright, is awarded annually by the Royal Horticultural Society, to the raiser of a perennial or woody ornamental plant, which is a deliberate cross that has not been made before, and which received an award at one of the Society's shows during the current year.

This has now been awarded to Miss Gillian Carlyon of Tregrehan Camellia Nurseries for her Camellia 'Jenefer Carlyon', a large silvery pink semi double × williamsii camellia, crossed in 1972 (*saluenensis* × *japonica* 'C. M. Wilson'). This received an Award of Merit on the 20th March, 1984.

This highly esteemed award has only once before been given for a camellia hybrid, to the Countess of Rosse in 1970 for 'Leonard Messel'.

Camellia sinensis Recent developments in vegetative propagation of tea

Camellia sinensis — développements récents de la multiplication du thé

Camellia sinensis — últimos adelantos en la propagación vegetativa del té

Camellia sinensis — Recenti sviluppi nella propagazione vegetativa del tè

DR. V. S. SHARMA
Upasi Tea Research Institute, Cinchona-642106

Rooting hormonal formulation:
We have developed a rooting hormonal formulation primarily to induce and hasten rooting of single-node, semi-hard wood cuttings of tea. Intensive and extensive trials were carried out and the results were published in UPASI Tea Sci. Dep. Bull. 37 :29-40. 1981 and PLACROSYM-IV (Proc. 4th ann. Symp. Plant. Crops): 107-112. (1981) 1982. The formulation has been widely tested in various commercial tea nurseries in South India over the years and now, its use has become a routine practice.

We have a feeling that this rooting hormonal formulation, for whose patent an application has been filed, may also be useful in the rooting of the ornamental Camellias and other semi-hard wood cuttings.

Grafting of fresh cuttings:
We have developed and streamlined techniques to graft *fresh*, single-node, semi-hard wood cuttings of tea before striking for rooting; this is a unique development in the propagation of horticultural crops. This technique also has been tested in different experiments and the results were published in the first article mentioned above and PLACROSYM-IV (Proc. 4th ann. Symp. Plant. Crops): 120-126, (1981) 1982.

We are of the view that grafting of fresh, semi-hard wood cuttings will be feasible in other horticultural plants too. Grafting the fresh cuttings reduced the time span in the nursery.

(Editor's Note: Dr. Sharma kindly states that the Institute is willing to supply experimental samples of the rooting hormonal formulation to interested parties.)

Camellias in a Russian work's greenhouse

Des camélias dans la serre d'une usine soviétique

Camelias en un invernadero de una fábrica rusa

Camelie nella serra di uno stabilimento russo

U. S. KIRICHENKO, gardener
Korosten', near Zhitomir

In 1971 we obtained from Adler[1] ten rooted cuttings of *Camellia japonica.* When we returned home, we planted them in two-litre pots using a mixture of leaf mould, greenhouse soil, top peat and sand (1:2:1:1).

At first we kept the plants under room conditions. For the winter we put them by a south window, separated from the room by a plastic film, and syringed them with water (20°C). During their growth we fed them with liquid nitroammophos[2] (30 g to 10 litres of water). The camellias grew well and two years later flowered. But they became crowded on the window-sill, and yet in the room the dry air caused bud-drop.

Hence we had to take little bushes into our work's greenhouse. There we planted them in soil made out of three-year old humus, peat and coarse peat[3] (2:1:2). When the camellias had taken we started to feed them with well-rotted cow-manure (1;10) alternating with ammophos[2] (30-40 g per 10 litres). The plants were syringed daily with warm water. During the summer the greenhouse is well ventilated and the air in it humidified.

For five years now, from December to

March, the camellias delight us with their red, pink and white double-petalled flowers.

We propagate the plants under plastic sheeting (frame height 25 cm).

After flowering we take cuttings from young woody shoots, with three nodes[4]. We leave the top leaf. The rest of the leaves we cut in half. The cut at the bottom (under the bud) is slanted. Cuttings are put into a solution of heteroaucsin*[5] (1 g per litre) for 4 hours. After which we plant them at an angle on a greenhouse bench in a mixture of hot-bed soil and peat (2:1). We cover it with 2 cm of sterilised clean river sand. We regularly syringe the plants with warm water and at the same time ventilate the frames. Twice, before and after the rooting, we apply a solution of phundozole[5] (0.2%) to prevent fungal infections. The percentage take is 90%.

After the cuttings are rooted we remove the plastic cover. First we replant the camellias in two-litre pots, and when they have grown, all the contents of the pot is replanted in the soil of the greenhouse, which is prepared from the hot-bed soil, two-year old humus and peat (2:1:1) with urea (30 g per square metre). The bushes grow splendidly and flower every year.

Notes by translator Mrs L. V. Jones:

1. Town in Caucasus on Black Sea Coast, SE of Soch.
2. Trivial name for ammonium phosphate plus ammonium nitrate.
3. Forest soil or coarse mountain earth.
4. Literally: two between-the-nodes spaces.
5. Trivial names for fungicide.

Note by John Tooby

*heteroaucsin must surely be a rooting hormone. Korosten is about 100 miles NW of Kiev.

I.C.S. Exhibits at R.H.S. Shows 1985

Les expos de la R.H.S. en 1985

Exposiciones de la R.H.S. en 1985

Mostre della R.H.S., 1985

JOYCE WYNDHAM

(London Organiser)

See colour section

Report on Camellia Competition, 12th-13th March, 1985

Camellias were scarce at the approach of the first Show at the R.H.S. Hall, owing to the severe weather, which affected the amount of blooms available.

With the co-operation of Trehane Camellias, the stand was set up with a display of grafting, showing the initial plant to be used, and then different plants through the procedure to the final new plant growing healthily. All materials needed were shown,and blooms were arranged as a background on moss, with a large centrepiece of camellias. These were supplied by Stonehurst, Chatsworth, the Savill Garden, and various individual contributors. The result received great interest from the public, and the exhibit was awarded the Flora Silver Medal. I would like to extend my thanks to all who helped to put on such a good show.

Report on Camellia Show, 10th-11th April, 1985

With the approach of the International Congress to be held at Brighton in May, 1985, it was decided to make this the theme of the second show.

Once again, camellias were in short supply, but much help was given by the Camellia Nurseries, and gardens. A square of moss, carefully prepared, had in the centre, the letters I.C.S. in red camellias, with arrangements of camellias in each corner. At the back a large oil painting of assorted blooms was placed, with the heading above, "International Camellia Congress, Brighton, 1985". Many photographs were taken of the display, and my thanks again to all who contributed, and worked so hard to make the stand such an attraction to the public. It is a notable fact of the interest shown, that a record number of new members were enrolled at these two shows.

The New Zealand Camellia Society National Show and Convention Tauranga, 24/26 August, 1984

Exposition et Convention Nationales de la Société Néo-Zélandaise des Camélias

Convención y Exposición Nacional de la Sociedad Neocelandesa de la Camelia

Mostra e Convegno Nazionale dell'Associazione Neozelandese della Camelia

JIM HANSEN
Waikanae, New Zealand See colour section*

As expected, Tauranga proved to be a popular venue, with some 330 members registering for the Convention. The members of the Western Bay of Plenty branch were the hosts, and the chairman of the branch, Mr Trevor Lennard, with the able assistance of an energetic committee, prepared an interesting programme, with visits to a variety of private gardens, an avocado orchard, a kiwi fruit winery and a scenic tour of Tauranga. Arrangements were also made for members to inspect gardens further afield on their way home on the Sunday and Monday. We were fortunate in having fine weather for the three days of the convention, sandwiched in between some very wet days.

The Show, held in the Queen Elizabeth Youth Centre,* provided some fine blooms in spite of the inclement weather beforehand. A feature of the show was the large number of entries in the seedling classes.

The successful exhibitors were:

Best bloom in show (Bethwaite Memorial Trophy); Best *reticulata* or *reticulata* Hybrid; Best bloom of American Origin (American Camellia Society Trophy) - 'Dr Clifford Parks'* Mrs C. D. Turnbull.

Best *japonica* (McLisky Memorial Trophy) - 'Nuccio's Jewel' Mrs J. A. Rodgers.

Best hybrid with no *reticulata* parentage (Society Award) - 'Seedling' Mr & Mrs H. Austin.

Best Yunnan *reticulata* (Durrant Trophy) - 'Crimson Robe' Mr & Mrs G. Wallis.

Best white bloom (Rayner Memorial Trophy) -'Elegans Champagne' Mr & Mrs R. Bambery.

Best Doak Hybrid (Doak Memorial Trophy) - 'Phyl Doak' Mr & Mrs J. A. Hansen.

Best bloom of New Zealand Origin (Edith Mazzei Trophy) - 'Patricia Coull' Mr & Mrs J. N. Rolfe.

Best bloom of Australian Origin (Colin Elliott Trophy) 'Dolly Dyer' Mr & Mrs R. Roberts.

Best Miniature bloom (Clere Memorial Trophy) - 'Bon Bon' Mr & Mrs H. B. Cave.

Best small bloom (Society Award) - 'Dolly Dyer' Mr & Mrs R. Roberts.

Best *reticulata* or *reticulata* hybrid seedling bloom (Clark Cup) - Mr & Mrs H. B. Cave.

Best *japonica* seedling bloom (Clark Cup) - Mr N. Haydon.

Best any other seedling bloom (Society Award) - Mr & Mrs H. Austin.

Three *japonica* blooms, different varieties. (Boon Memorial Trophy); Six *japonica* blooms, different varieties (Corkill Trophy); Twelve *japonica* blooms, different varieties (Society Award); Six *reticulata* or *reticulata* hybrid blooms different varieties. (Society Award); Twelve blooms different, Any species or varieties. (Society Award) - Mr & Mrs H. B. Cave.

Three *non-reticulata* hybrid blooms different varieties (Les Jury Memorial Trophy); Six non-*reticulata* hybrid blooms, different varieties. (Sir Victor and Lady Davies Memorial Trophy) - Mr & Mrs R. J. Macdonald.

Most first places in individual bloom classes (Society Award) - Mrs M. Mathers.

Honours Table Blooms:

'Swan Lake'	Mrs P. A. Nelson
'Mrs Charles Simmons'	Mrs M. D. Manuel
'Brushfield's Yellow'	Mrs J. Currie
'Fashionata' and 'Tom Knudsen'	Mr & Mrs R. J. Macdonald
'South Seas'	Mrs J. Sole
'Kathryn Funari'	Mr & Mrs H. B. Cave
'Neisha Gamlin'	Mr A. Gamlin
'Tiffany'	Mr & Mrs W. A. Peters
'Tamsin Coull'	Mr & Mrs T. Lennard
'Galaxie'	Mr & Mrs J. A. Hansen
'Elsie Ruth Marshall'	Mrs K. Joyce

'Massee Lane' and 'Howard Asper'	Mrs M. M. McRae
'William Hertrich'	Mr & Mrs T. C. Devereux
'Mouchang'	Mrs N. Turner
'Woodford Harrison'	Mr & Mrs R. H. Clere
'Lasca Beauty'	Mr & Mrs C. R. Whittle

The next National Show and Convention is to be held in Wanganui at the end of August, 1985.

Anemoniflora

Anemoniflora
Anemoniflora
Anemoniflora

T. J. SAVIGE
Wirlinga, Australia

In the International Camellia Journal Number 13, 1981, in John Tooby's article "The Early Introductions of Camellias to England from China", mention is made of 'Anemoniflora' under the name "Po Chu Cha".

When the International Camellia Society's expedition to China to plant the Camellia Friendship Gardens was planned, a china plate was commissioned as a souvenir for those attending. This plate carried on its face a replica of one of the earliest Camellias to reach the West. This was a painting of "Po Chu Cha" from the collection of Camellia Paintings in the R.H.S. Lindley Library, which were commissioned by John Reeves, from Chinese artists, while he was stationed as Inspector of Tea for the Eastern India Company at Canton.

On the back of the plate are the characters 寶珠茶 "Po Chu Cha" and 'Anemoniflora', followed by the inscription: "The design is based on Number 12 of the Reeves collection of Chinese paintings of Camellias (1816-1831) in the Lindley Library by kind permission of the Royal Horticultural Society."

The above characters, which were originally transliterated as Po Chu Cha, are now written in the modern "Pinyin" form as "Baozhu Cha". The first character "Bai", (Po) 寶 has been simplified to 宝 and translated as "treasure" or "precious". The second character, "Zhu", (Chu), 珠 translates as "pearl" or "jewel" and the third character "Cha" 茶 translates as Camellia. The complete epithet has been translated both as "Precious Pearl Camellia"and "Jewellery Camellia".

The first record of the characters for "Baozhu" is in the "Bencao Gangmu" (Materia Medica with commentaries) by Li, Shizhen, published in the year 1590 AD and it seems likely from later writings that this is the same Camellia as we now know as "Anemoniflora'.

However some confusion has arisen in modern times as Fang, Shumei in "Tiannan Chahua Xiaozhi" (An Account of Kunming Camellias), 1930 also published the same name for an old *C. reticulata* cultivar. This particular *reticulata* has been given the Western synonym "Noble Pearl" by Dr W. E. Lammerts in his article "The New *Reticulata* Hybrids" published in the "American Camellia Yearbook", 1950 pp.1-11. It has since collected other synonyms such as "Red Jewellery", "Jewellery" and "Precious Pearl Camellia".

It is possible, but doubtful, that the 'Baozhu Cha' published by Wang, Xianjin,1621 in "Qunfangpu" (Thesaurus of Botany) is the *C. reticulata* cultivar.

However a publication of 1937 from China is *Chung kuo shu mu fen lei hsueh* by Chen, Yung which has "'Hong Chahua', (Red Camellia); *C. japonica* var. 'Anemoniflora' Curtis. Flowers, red with 5 large petals; stamens developed into small narrow petals."

Then in 1955 another author, Chen, Chih wrote in his work, *Kuan Shan shu mu hsueh*, (Study of Ornamental Plants); "Yangguifei", (var. 'Anemoniflora', Curtis). Yangguifei is the name of a concubine of a Tang Emperor previously described under the name "Guifei" instead of Yangguifei. Yang was her family name and often not used. It is also called "Hong Chahua", (Red Camellia) and the flower resembles an Autumn Peony. The outer petals are broad and flat while the inner ones are small, broken and irregular. Stamens, rare; flower crimson."

Wang, Xianjil, (1621) in *Qunfangpu* used the name "Guifei Cha". Then, in the manus-

cript of Professor Te-Tsun Yu written about 1948, but published by Frank Griffin in the *Camellian,* 1964 is listed a Camellia "Zuiyangfei" or the "Intoxicated Lady Yang". This is the same concubine who is the heroine of the famous Pekin opera "The Pear Tree", in one scene of which she makes herself intoxicated to foil the Emperor's advances.

It seems likely that these are all the same Camellia and if so it would seem that 'Baozhu Cha' is the priority name.

Lakeland U.K. Conference, 1986

25th - 28th April

Conférence britannique 1986 dans la Région des Lacs, Angleterre

Conferencia de la Región de los Lagos, R.U., 1986

Conferenza Britannica 1986 nella Regione dei laghi

JOYCE WYNDHAM
London Organiser

For the first time, the International Camellia Society are planning to visit the Lake District, and see many famous gardens, and beauty spots.

It will be based at Windermere, and delegates will stay at the well-known old coaching Inn, the Swan Hotel, at Newby Bridge, right on the shores of the lake.

Gardens to be visited are Lingholm, Muncaster, Holker Hall, White Craggs, Stagshaw, Brockhole and Holehird.

The highlight of the weekend will be a visit to the Harrogate Show on the Saturday, which will incorporate seeing over the trial grounds at Harlow Car. On the Sunday we will be taking a trip on the Ravenglass railway up Eskdale.

Delegates planning to arrive on the Thursday evening will be accommodated by Mr. J.Bertlin, manager of the Swan Hotel, who will make arrangements to meet anyone arriving by train.

We are indebted to Mr. Geoff Yates, whose knowledge of the area, and the hosts of the gardens we are going to see, has been a great help in compiling a very interesting programme.

1985 I.C.S. MEMBERSHIP

	Life		Ordinary		Total
	Single	Family	Single	Family	Members
Argentina			1		1
Australia	5	3	150	66	293
Austria	2				2
Belgium			3	1	5
Canada			2		2
Channel Islands	4	1	32	11	60
China			2		2
Denmark			2		2
France			39	18	75
Germany			23		23
Isle of Man	1				1
Hong Kong			2		2
Italy	4		15	1	21
Japan	20	2	149		173
Korea			2		2
Malta			1		1
Netherlands			3	2	7
New Zealand	5	1	27	27	88
Portugal			2	8	18
Rep. of Ireland	1		9	1	12
South Africa	3		21	1	26
Spain	1		28		29
Switzerland			5		5
U.K.	14		194	60	328
U.S.A.	11		132	68	279
Zimbabwe	1			1	3
TOTAL	72	7	844	265	1460

By-Laws of the International Camellia Society as at 10th May, 1985

ARTICLE 1 — MEMBERS, MEMBERSHIP AND FEES:

A. There shall be the following classes of members of the Society:
   1. REGULAR MEMBERS. Persons who are interested in the purposes of the Society and who make an annual contribution to the Society, such contribution to be determined by the Directors from time to time.
   2. LIFE MEMBERS. Persons who desire to contribute a sum equal to at least twenty times the current annual subscription, in lieu of any annual contributions.
   3. HONORARY MEMBERS. The Board of Directors, in its sole discretion, may bestow this title on any person who has furthered the purposes of this Society in some outstanding manner. Such Honorary Member shall be relieved of any requirement to make any monetary contribution to the Society.

B. RIGHTS OF MEMBERS.
   1. Each member of the Society shall be entitled to cast one vote for the election of Directors and other officials in the manner hereinafter prescribed.
   2. Each member shall be entitled to attend and participate in any annual or other meeting of the membership as may be called by the Directors.

ARTICLE II — DIRECTORS

A. NUMBER.
   1. Apart from the duly elected officers, who shall be ex-officio members of the Board, having the same powers, voting rights and responsibilities as other members of the Board, members residing in each specified region shall elect their own Director or Directors in accord with the following numbers:

UNITED KINGDOM	3	FRANCE	2
AMERICA	3	ITALY	1
AUSTRALIA	3	NEW ZEALAND	1
ASIA	2	PORTUGAL	1
AFRICA	1	SPAIN	1
		OTHER REGIONS — (different regions)	2

   2. The number of the Board of Directors may be increased or decreased within the limits of the charter by majority vote of the Board of Directors.

B. TERM.
   1. The term of office of a member of the Board shall be three years or thereafter until a successor has been elected.
   2. If any member of the Board dies, resigns or for other reasons ceases to be a Director, the vacancy shall be filled for the unexpired portion of the term on a motion to the Board by the President who shall consult with the surviving Director(s) and Membership Representative of that Region or in their absence with the membership of that Region before making such nomination.

C. POWER OF BOARD.
   1. The Board of Directors shall regulate and supervise the management and operation of the Society. It shall attend to and manage all of the affairs of the Society, shall make such arrangements for carrying on the business of the Society as it deems best, and in addition to the powers by these By-Laws expressly conferred upon the Board, it may exercise all of the powers of the Corporate Society and do all such lawful acts and things as are not by statute or by the charter or by these By-Laws required to be exercised or done by the members.
   2. A majority vote of the Board of Directors shall constitute a decision of the Board.
   3. Because of the International aspect of the Society it is contemplated that practically all of the affairs of the Society shall be conducted by mail. Board of Directors meetings and decisions necessarily will have to be conducted by mail and the Board is hereby expressly authorised to promulgate such rules of procedure for presentation of policy and voting thereon as it deems expedient.

D. Absence from a Meeting of Directors-in-person: When a meeting of the Board of Directors is called, a Director who cannot attend may nominate a proxy from his Country or Region to act in his stead. The Secretary must be advised in writing by the Director concerned prior to the commencement of the meeting. Acceptance shall be on the vote of those Directors present, with immediate effect.

ARTICLE III — PLACES OF BUSINESS, MEETINGS OF MEMBERS:

A. The Society may have as many places of business and in such locations as its Board of Directors deems required.

B. It is not expected that it will be possible for members from every part of the world to gather at an Annual Meeting, but there may be periodical Regional Meetings of the Society, the time and place of such Regional Meetings to be fixed and notified to the President, the Secretary, and to all members resident in the region by the Regional Director or Directors.

ARTICLE IV — OFFICERS:

A. The Officers of the Society shall be a Patron, a President, three Vice-Presidents, an Editor, a Secretary, a Treasurer and a Membership Representative from each Region. From time to time the Board may create such other offices as it may deem necessary.

B. The President and Vice-Presidents of the Society shall be from members of the Society and shall be elected by the members every three years. Vacancies may be filled or new offices created and filled at any meeting of the Board. Each Officer shall hold office until his successor shall have been duly elected and shall have qualified. A President may not hold office for more than two successive periods of three years, except for having filled a vacancy in the office for a preceding period of less than three years.

C. The Secretary, Treasurer, Editor and Officers other than the President and Vice-Presidents shall be appointed by the Board of Directors, and shall serve for such length of time as the Board of Directors determines.

D. A Membership Representative shall be appointed on a motion to the Board by the Director(s) of the Region concerned or in the absence of such Director(s) by the President after consultation with the Membership of that Region.

E. The duties of the Officers shall be such as usually attach to such offices, and in addition thereto, such further duties as may be designated or delegated to them from time to time by the Board. The Duties of a Membership Representative shall be to co-ordinate the activities of members in the Region; to provide a link between the Board of Directors and the members. Membership Representatives shall be circulated with all papers sent to Directors and shall be invited to Directors' meetings but shall not be entitled to vote. The Board of Directors shall be authorised to prescribe the amount of compensation for any Officer, or employee of the Society.

ARTICLE V — COMMITTEES:

The Board of Directors may delegate such of its powers as deemed required to Officers of the Society or to any committee it may see fit to create.

ARTICLE VI:

The Board shall promulgate such rules as may be deemed proper to permit this Society to affiliate with other Horticultural Societies, or other societies to affiliate with this Society.

ARTICLE VII — CONTRACTS, CHEQUES, DEPOSITS AND FUNDS:

A. CONTRACTS:
The Board of Directors may authorise any Officer or Officers, agent or agents of the Corporate Society, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporate Society and such authority may be general or confined to specific instances.

B. CHEQUES, DRAFTS, ETC.:
All cheques, drafts and other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporate Society, shall be signed by such Officer

or Officers, agent or agents of the Corporate Society and in such manner as shall from time to time be determined by resolution of the Board of Directors.

C. DEPOSITS:
All funds of the Corporate Society shall be deposited to the credit of the Corporate Society in such banks, trust companies or other depositories as the Board of Directors may select.

D. GIFTS:
The Board of Directors may accept on behalf of the Corporate Society any contribution, gift, bequest or devise for the general purpose or for any special purpose of the Corporate Society.

ARTICLE VIII — BOOKS AND RECORDS:

The Corporate Society shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its members and Board of Directors, and shall keep at the registered or principal office a record giving the names and addresses of the members. All books and records of the Corporate Society may be inspected by any member, or his agent, or attorney for any proper purpose at any reasonable time.

ARTICLE IX:

These By-Laws may be altered, amended or repealed and new By-Laws may be adopted by the members at an annual meeting or by a majority vote of the Board of Directors provided that at least thirty (30) days written notice is given to each member of the Board of the intention to alter, amend, or repeal or to adopt the new By-Laws at such meeting.

INTERNATIONAL CAMELLIA SOCIETY

Income and Expenditure Account for the year ended 31st December 1984

INCOME			**EXPENDITURE**		
By Subscriptions	4,312,62		To Printing and Stationery	326.81	
Advertisement in Journal	51.35		Postage and Telephone	96.16	
Donation to Journal			Hire of room for Meetings	45.00	
from UK	200.00		Journal: Printing	4,149.23	
Raffle at Cornish			Postage	446.99	
Weekend	72.50				5,064.19
Interest on Deposit			Supply of Ties		481.33
Accounts	445.31		Contribution to work on		
Total Income		5,081.78	Nomenclature		1,199.39
Balance of Expenditure					
over Income		1,633.13	**Total Expenses**		6,744.91
		£6,744.91			£6,744.91

Balance Sheet as at 31st December 1984

LIABILITIES				**ASSETS**		
Accumulated Funds				Sundry Debtors		29.31
Balance	b/f	6,253.63		Cash: At Bank		
Less Balance of				Special Deposit		
Expenditure over				Account	4,000.00	
Income for year		1,663.13	4,590.50	Deposit Account	81.82	
				Current Account	479.37	4,561.19
			£4,590.50			£4,590.50

ICS Members' Subscriptions Rates and the representatives to whom payable:

AFRICA (R 10.00, or Husband and Wife R 13.00) Mr Leslie Riggall, Mdoni Road, Kloof, Natal 3600, South Africa

AUSTRALIA ($ 10.00, or Husband and Wife $ 14.00) Miss Nance Swanson, 43 Wellington Road, East Lingfield, N.S.W. 2070 Australia

AMERICA ($ 11.00, or Husband and Wife $15.00) Mr Thomas H. Perkins III, 405 Perkins Drive, Brookhaven, Miss. 39601, U.S.A.

ASIA (Y 2400 or Husband and Wife Y 3300) Mr Goro Iimure, 3-1-13 Kouyama Nerima-Ku, Tokyo, Japan

FRANCE (60.00 Frs, or Husband and Wife 80.00 Frs) M. Claude Thoby, Route de Paris, B.P.3, 44470 Carquefou, France

GERMANY (22.00 DM, or Husband and Wife 29.00 DM) Dr. Klaus Hacklander, D5500 Trier, Simeonstrasse 5, Germany

ITALY AND SWITZERLAND (Lire 12000, or Husband and Wife Lire 16000) Dr Antonio Sevesi, Piazzale Cadorna 6, 20123 Milano, Italia

NEW ZEALAND ($ 12.00, or Husband and Wife $16.00) Mr R. H. Clere, 8 Chesham Ave., Taupo, New Zealand

PORTUGAL (E. 800, or Husband and Wife E. 1000) Senora Clara de Seabra, Praceta Prof, Egas Moniz, 167-4° esq. 4100 Porto, Portugal

SPAIN (P. 1100, or Husband and Wife P. 1400) D. Juan Armada Diez de Rivera, P° Castellana 213, 28046, Madrid

UNITED KINGDOM AND WESTERN EUROPE (£6.00, or Husband and Wife £8.00) Mr John E. Mead, 20 Hassocks Road, Hurstpierpoint, West Sussex, BN6 9QN

Life Memberships available for an amount of at least twenty times that rate for annual subscriptions.

NEW MEMBERS of the International Camellia Society

At the Brighton Congress 1985 the Board of Directors decided that a complete list of Society Members would be published in the Journal only every third year. In the intervening years the Journal will publish the names and addresses of new members and changes of addresses or status and the correction of errors in previous listing of existing members.

* Life Members † Honorary Member

AUSTRALIA

New Members

HAMPTON, Mrs Evelyn, 108 River Terrace, Kangaroo PT. Qld. 4169
MCPHERSON, Mr T. W., Box 19 P.O., Gundagai, N.S.W. 2722
MORROW, Dr. & Mrs C. A., 168 Samford Road, Enogerra, Qld. 4051
SULLIVAN, Mr & Mrs Cecil, "Lindfield Park", Mt. Irvine Road, Mt. Wilson, N.S.W. 2740
THOMPSON, Mr Philip, 86 Cessnock Road, Weston, N.S.W. 2326
WHITE, Mrs Joyce, 8 Blytheswood Ave., Warrawee, N.S.W. 2074
WYLIE, Mr & Mrs L. G., 10 Boomerang Road, Springwood, N.S.W. 2777

To Life Members

ROGERS, Mrs J. Y., "Camelot", 40 Martin Road, Centennial Park, N.S.W. 2021
From British Medical Laboratories Pty. Ltd., P.O.Box 31, Arncliffe, N.S.W. 2205
SNOOK, Mrs H. J., 50 Hobbs Ave., Dalkeith, W.A. 6009

Amendments to Names

BOER, Miss Eva, 6 Linden Crescent, Linden Park, S.A. 5065
Not Mrs Eva Boer
PATON, Mr & Mrs John, 14 Illoura Ave., Wahroonga, N.S.W. 2076
To Dr & Mrs John

Omission from 1984 Journal

KNYVETT, Mrs B. J. "Brombee", Leadville, N.S.W. 2831

Change of Address

ALPEN, Mr & Mrs John E.
To Villa 128, Bayview Gardens Village, Cabbage Tree Road, Bayview, N.S.W. 2104
AUSTRALIAN CAMELLIA RESEARCH SOCIETY
To C/- Treasurer, Mr B. H. Smith, 32 North Arm Road, Middle Cove, N.S.W. 2068
A.C.R.S. N.S.W. FOUNDATION BRANCH
To C/- Treasurer, Mrs G. Clubb, 27 Raglan Street, Mosman, N.S.W. 2088
A.C.R.S. WEST AUSTRALIAN BRANCH
To C/- 11 Evershed Street, Myaree, W.A. 6154
ST. ALBANS (EPPING) GARDEN LOVERS CLUB
To C/- Hon. Treasurer, Mr P. E. Buesnel, 2/37 Fairlight Cr., Fairlight, N.S.W. 2094
FERGUSON, Mr. & Mrs. J.
To 16 Springdale Road, Killara, N.S.W. 2071

To Joint Membership
CAMPBELL, Prof. & Mrs. K. O., 188 Beecroft Road, Cheltenham, N.S.W. 2119
WOODLANDS, Mr & Mrs E. F., Three Bears Nursery, 72 Castle Hill Road, West Pennant Hills, N.S.W. 2120

To Joint Membership & Change of Address
HOOPER
To Mr & Mrs L. R. C., Unit 10A/19-20 South Esplanade, Glenelg Sth. S.A. 5045
KINGSBURY
To Dr. & Mrs A., 37 Shenton Road, Swanbourne, W.A. 6010

AUSTRIA
New Members
HOLEBAUER, Alois, Rohr 15, A 8413, St. Georgen.
NOGRASEK, Günther, Bauernfeldstrasse 31, A 8020 Graz.

BELGIUM
New Members
IIMURE, Koichi, Clos Dandoy 1, 1180 Bruxelles.

CHANNEL ISLANDS
New Members
BOURKE, Martin, Le Jardin de Verp, Douet de Rue, St. Lawrence, Jersey.
HALL, Mrs Anthea, La Chasserie, Mont Cochon, St. Lawrence, Jersey.
HALL, Mr & Mrs Nicholas, La Falaise, St. Mary, Jersey.
HARMON, Gordon J. G., Kurangarira, St. Saviour's Hill, Jersey.
LEEDS, Lady, Le Vivier, Le Grande Route de Rozel, St. Martin, Jersey.
REYNOLDS, Michael, Westward, La Marquanderie, St. Brelade, Jersey.
SCOTT-DALGLEISH, Mrs M., La Ferriere, Five Oaks, St. Saviour, Jersey.

WEST GERMANY
New Members
ANSEMS, Paul, Am Bersberg 14, 4194 Bedburg-Hau.
BATZENSCHLAGER, Dr. Ingrid, Altstadt 28, 8300 Landshut.
BILLIG, Reinhold, Quellenstrasse 36, D 5480, Remagen-Kripp.
BOEHE, Wilhelm-Dietrich, Langer Rehm 8, 2305 Heikendorf.
BRANDIS, Professor Dr. H., Zederweg3, D 5300 Bonn 1.
DE SILVA, Frau Elisabeth, Merianstrasse 21, 5500 Trier.
ELSNER, Rolf W. G., Kaiser Wilhelmstrasse 12, D 4980 Buende.
HARTNAGEL, Frau Mariette, Sittardheide 10, 4050 Mönchengladbach 5.
HOERSCH, Frau Ingrid S., Hagenwiesenstrasse 3, 7336 Uhingen 1.
HORSCH, Frai Hanna, Am Kandelback 41, 5500 Trier.
MEHLHORN-SCHMIDT, Frau Dagmar, Bismarekstrasse 8, 7443 Friekenhausen.
MEISHEIT, Wolfgang, Hauptstrasse 79, 5068 Odenthal 3.
MEISSNER, Frau Gisela, Am Kornberg 64, 5900 Siegen 21.
NOUSCH, Joachim, Rheinbacher Weg 11, 5308 Rheinbach 5.
PFEIFFER, Frau Ingrid, Am Stäuben 6, 899 Lindau.
SCHMIDT, Eilhard, Hauptstrasse 24, 6581 Kempfeld.
SCHWANKE, Dr. Werner, Moerikestrasse 41, D 4030 Ratingen 4 - Lintorf.
STEPHAN, Gisbert, Bischoestrasse 39, 4500 Osnabrück.
STRUNZ, Christian, Thuelecke 4, 4795, Delbrueck.
VOGEL, Frau Anita, Heinrich-Delgs-Strasse 260, 61 Darmstadt 13.

REPUBLIC OF IRELAND
New Members
MERRY, B.Sc., Mrs Tracy J., 29 Vale View Lawn, The Park, Cabinteely, Dublin 18.

ITALY
New Members
CATTOLICA, Guido - via Ravizza No. 71 - 57100 Livorno.
BOTTAI Martin - via Irnerio No. 6 - 40126 Bologna.
TESI, Roberto - via di Ramini No. 159 - 51030 Pistoia.
SOPRANO arch. Lidia - via Guido Reni No. 2 - 00196 Roma.

THE NETHERLANDS
New Members
ROGGEMA, Dr. Jacques, Oosterweg 17, 9995 V J Kantens.

NEW ZEALAND
New Members
ABRAHAM, Mrs D. 19 Jickell St., Palmerston North.
BEASLEY, Mrs A. J., 47 Churchill St., Whakatane.
BETSCHART, Miss A., Paraonui Rd., R.D.1, Tokoroa.
CAMPBELL, Mrs B., 3/314 Gloucester St., Taradale, Napier.
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BROWN, Mr Bernard, 2 Boundary Road, Gillits 3610, Natal.
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SOUTH AFRICAN CAMELLIA SOCIETY, Sec. Mrs Veronica Joubert, 32 Ernest Whitcutt Road, Cowies Hill 3600, Natal.
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JONES, Thomas, Chilton Cantelo Gardens, Chilton Cantelo, Yeovil, Somerset BA22 8BE.
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LIPPE, Mrs Nadia, 224 Clepington Road, Dundee, Scotland.
LORT-PHILLIPS, Peregrine, 145 Hurlingham Road, London S.W.6.
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PLUMMER, Mr and Mrs R. J., The Rest, Station Road, Chailey, Lewes, E. Sussex BN84 1XG.
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WHISTEY, Fred, c/o The Daily Telegraph, Fleet St, London EC4P 4BL.
WILSON, Mrs S. A., 18 Marco Road, London W6 0PN.
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U.S.A.
New Members
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LANDRY, Mr and Mrs A. P., 10522 Fernciiffe Ave., Baton Rouge, La. 70815
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* ARMSTRONG, J. J., 107 N. Central Ave., Belmont, N.C. 28012

Address Change
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ACKERMAN, Mr and Mrs Wm. L., P.O.Box 120, Ashton, Md. 20861
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CUNNINGHAM Mr George M., 270 Sunnycroft Rd., Ben Lomand, Ca. 95005
EYSTER, Flora C., 1992 Commonwealth Ave., 8 Brighton, MA 02135
FENDIG Albert, Box 2083, Etowah, N.C. 28729
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GORERTZ, W., 1763 Royal Oaks Dr., Duarle, Ca. 91010
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JOHNSON, Mr and Mrs Alfur, 585 Longspur Dr, Woodlands, Texas, 77380
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MITCHELL, Avan, 2 Box 2684, Santa Fe Lake, 32666
THOMPSON, Bernice Gunn, 15280 Corretera Dr, Whittier, Ca. 90605

ZIMBABWE
Members Omitted from 1984 List
GOSS, Mr & Mrs Gary T., P.O.Box 56, Penhalonga, Mutare.
* SOFFE, Mrs O. R., Strickland Lodge, Kingsley Fairbridge St., Mutare.

STOP PRESS

Ballot for President

We hereby certify that having counted the voting papers placed before us that the votes cast for each candidate were as follows:

Mrs Violet Stone USA 379
Mr John Tooby UK 406

Signed: Moore Bedworth & Co.
Incorporated accountants, Barnstaple, Devon.
Dated: 30.9.85

A message from the President Elect

Un message du Président désigné

Un mensaje del Presidente electo

Messaggio del Presidente nominato

JOHN TOOBY

First of all I must thank all those members who voted for me. Now that the result of the election is known we must work together for the general good of the Society. We can count ourselves fortunate to have two teams of people able and willing to give their time for the benefit of us all. I am sure that the British team do not wish to hang on to the job indefinitely.

Next I want everyone to know that Mrs Violet (Vi) Stone is very highly regarded by all of us and not only by the large number of members who voted for her. She has done great work for the Society and for camellias which we shall all remember with gratitude.

Our membership is up again. Here I must congratulate all our Membership Representatives for their hard work in collecting subscriptions and enrolling new members; in particular our new Membership Representative for Germany/Austria, Dr. Klaus Hacklander has, with enthusiastic help from Peter Fischer, vastly increased our membership in those countries.

After three years the rate of subscription has to go up; but the level remains modest and members will still find the Society very good value. Certainly the Executive is doing all it can to contain costs while maintaining the high standard of the Journal.

Nancy and I look forward to meeting old friends and making new ones next September at Sydney where a very attractive programme has been arranged. Till then our very best wishes to everyone.

I want now to pay my tribute to our retiring President Mrs. Violet Lort-Phillips. Over the last three years she has devoted generous amounts of time energy and skill to the affairs of our Society in a way which is an example to us all.

Please note that following the appointment of John Tooby as the Society's President, the new Journal Editor, to whom all future copy should be sent is: MRS. JO FREEMAN,
THE LEA RIG,
PELYNT, LOOE,
CORNWALL, PL13 2LU.

See page 10

Thos. Perkins III

Morag Llewellyn

Above: Society officers and Directors at Heaselands. *From left to right: David Trehane, Ralph Budge, John Tooby, Richard Clere, Jean Laborcy, Juan Armanda, Mayda Reynolds, Vi Stone, Vi Lort-Phillips, Lewis Fetterman, Nance Swanson, Dr. Antonio Sevesi, Joan Bowskill, Cicely Perring, Kenwyn Clapp, Thomas Perkins, Goro Iimure, Dr Hagiya*

Vi Stone, John Tooby & Boyd McRee at Leonardslee

Ken Hallstone

Lady Rosse with a group of I.C.S. members at Nymans

See page 16

Camellia kissii

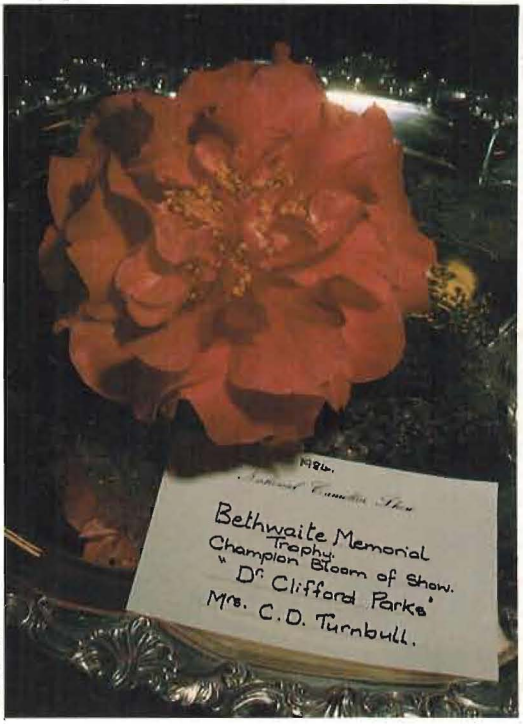
See page 19

'Bonanza'

See page 19

'Rainbow'

See page 95



Championship bloom N.Z. Show

See page 95

Mrs. Y. Cave

The Show Hall, Tauranga 1984

See page 30

A branch of C. chrysantha in the wild

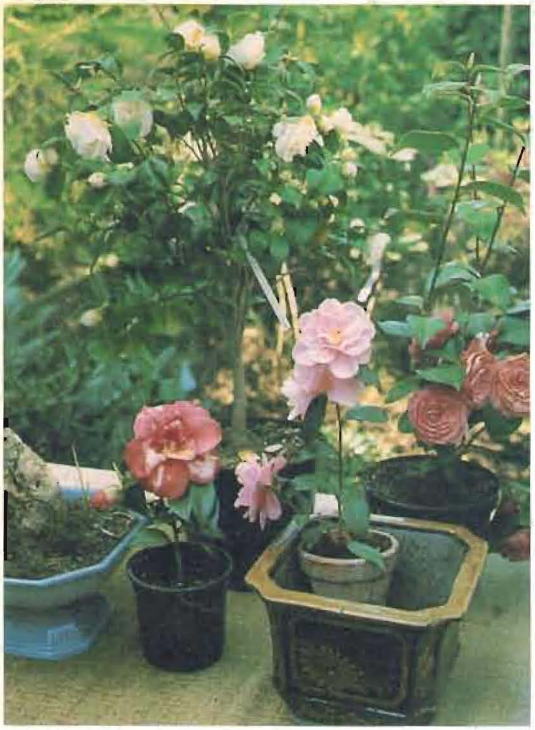
A "hybridizer's nightmare" — looking at all the wasted pollen

See page 30

An exhibit at the Oporto Show by the Society's Membership Representative Senora Clara de Seabra

See page 42

See page 52



Dr. Hackländer's Camellias

See page 63

500 year old reticulata

See page 66

'Dubia or Dubious?'

See page 72

Quarndon Hall garden and Camellia House

See page 53

Low soft light, background out of focus because wide f stop used — f4. Some detail and toning in hanging wistaria

Bright sunlight, background is sharper because smaller f stop used — f8, but overhanging wistaria gone dark against bright light

Perennial borders with sun behind a cloud, but still against the light, giving good detail on hairy leaves and buds

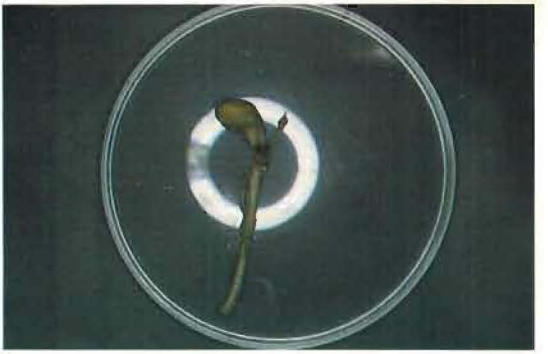
Perennial borders with bright sunlight and against the light, giving more contrast and strong shadows

Reticulata hybrid San Marino in sunlight. Background has gone dark and there are bright highlights in the petals

Reticulata hybrid San Marino with duller light, sun behind a cloud, giving greater detail in the background and good detail in the petals without strong highlights

See page 67

Culture sur gélose de graine de Camellia



greffe in vitro

culture sur milieu perlite

greffe aprés 10 jours

greffe aprés 20 jours

greffe aprés 27 jours

greffe aprés 30 jours, mise en container

greffe aprés 3 ans

See pages 70 and 71

Top: 8 week's old cultures of various clones (Fig. 1)
Middle: Stage of shoot multiplication (Fig. 2)
Bottom: General aspect of several plantlets under ambiental conditions (Fig. 5)

Top: The rooting of shoots regenerated in vitro (Fig. 3)
Bottom: Transfer to soil the rooted shoot (Fig. 4)

See page 76

C. japonica with white margins found on one of the Goto Islands

See page 83

Sheffield Park — The second lake in May

See page 94

Sylvia Glass

I.C.S. Exhibit at Royal Horticultural Society's Show, London

See page 92

'Jenefer Carlyon' — AM

Printed by Quintrell & Co. Ltd., Wadebridge 2831